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GRADED NATURE READERS

A WATCHER IN THE WOODS

BY DALLAS LORE SHARP

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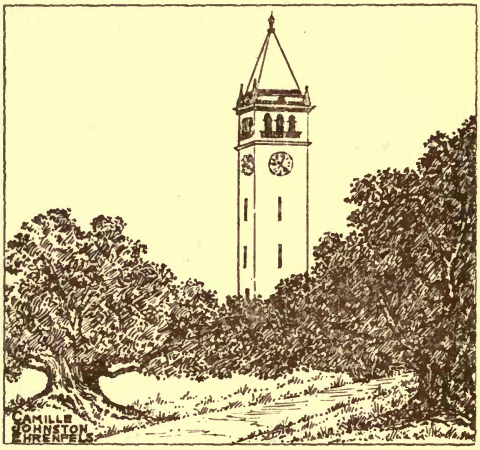

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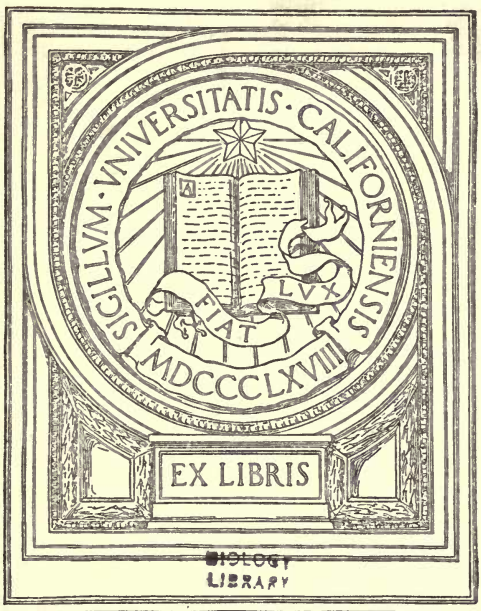

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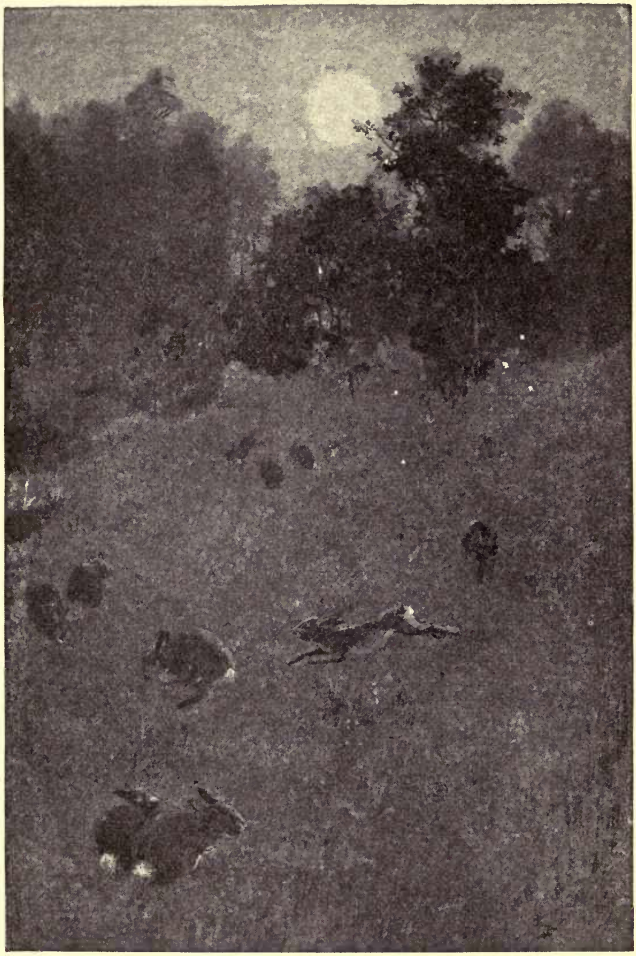
A WATCHER IN THE WOODS



"The feast is finished and the games are on."

A WATCHER IN THE WOODS

BY

DALLAS LORE SHARP

Author of "Wild Life Near Home"

WITH ILLUSTRATIONS
BY BRUCE HORSFALL

NEW YORK
THE CENTURY CO.

QL81
S52
1903
Biol
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Published November, 1903

UNIV. OF CALIFORNIA
3101

PRINTED IN U. S. A

TO
THE TWO LITTLE WATCHERS
AT HOME

M252443

PUBLISHER'S NOTE

Leading superintendents of schools and teachers have been pointing out that in "Wild Life Near Home," by Dallas Lore Sharp, there is much valuable supplementary reading for schools, and no less an authority than Mr. John Burroughs, in his recent article in the "Atlantic Monthly" entitled "Real and Sham Natural History," made the statement that "of all the nature books of recent years, I look upon Mr. Sharp's as the best."

The present volume will be found to contain carefully selected chapters from "Wild Life," arranged with special reference to nature study in the schools, where it is hoped that it will become popular with both teachers and pupils.

October 15, 1903

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BIRDS' WINTER BEDS

BIRDS' WINTER BEDS

The owl, for all his feathers, was a-cold.

A STORM had been raging from the northeast all day. Toward evening the wind strengthened to a gale, and the fine, icy snow swirled and drifted over the frozen fields.

I lay a long time listening to the wild symphony of the winds, thankful for the roof over my head, and wondering how the hungry, homeless creatures out of doors would pass the night. Where do the birds sleep such nights as this? Where in this bitter cold, this darkness and storm, will they make their beds? The lark that broke from the snow at my feet as I crossed the pasture this afternoon—

What comes o' thee?
Whar wilt thou cow'r thy chittering wing,
An' close thy e'e?

The storm grew fiercer; the wind roared through the big pines by the side of the house and swept hoarsely on across the fields; the pines shivered and groaned, and their long limbs scraped over the shingles above me as if feeling with frozen fingers for a way in; the windows rattled, the cracks and corners of the old farm-house shrieked, and a long, thin line of snow sifted in from beneath the window across the garret floor. I fancied these sounds of the storm were the voices of freezing birds, crying to be taken in from the cold. Once I thought I heard a thud against the window, a sound heavier than the rattle of the snow. Something seemed to be beating at the glass. It might be a bird. I got out of bed to look; but there was only the ghostly face of the snow pressed against the panes, half-way to the window's top. I imagined that I heard the thud again; but, while listening, fell asleep and dreamed that my window was frozen fast, and that all the birds in the world were knocking at it, trying to get in out of the night and storm.

The fields lay pure and white and flooded with sunshine when I awoke. Jumping out of bed, I ran to the window, and saw a dark object on the sill outside. I raised the sash, and there, close against the glass, were two quails—frozen stiff in the snow. It was they I heard the night before fluttering at the window. The ground had been covered deep with snow for several days, and at last, driven by hunger and cold from the fields, they saw my light, and sought shelter from the storm and a bed for the night with me.

Four others, evidently of the same covey, spent the night in the wagon-house, and in the morning helped themselves fearlessly to the chickens' breakfast. They roosted with the chickens several nights, but took to the fields again as soon as the snow began to melt.

It is easy to account for our winter birds during the day. Along near noon, when it is warm and bright, you will find the sparrows, chickadees, and goldfinches searching busily among the bushes and weeds for food, and the crows and jays scouring the fields. But what about them during the dark? Where do they pass the long winter nights?

Why, they have nests, you say. Yes, they *had* nests in the summer, and then, perhaps, one of the parent birds may be said to have slept in the nest during the weeks of incubation and rearing of the young. But nests are cradles, not beds, and are never used by even the young birds from the day they leave them. Muskrats build houses, foxes have holes, and squirrels sleep in true nests; but of the birds it can be said, "they have not where to lay their heads." They sleep upon their feet in the grass, in hollow trees, and among the branches; but, at best, such a bed is no more than a roost. A large part of the year this roost is new every night, so that the question of a sleeping-place during the winter is most serious.

The cheerful little goldfinches, that bend the dried ragweeds and grass-stalks down and scatter their chaff over the snow, sleep in the thick cedars and pines. These warm, close-limbed evergreens I have found to be the lodging-houses of many of the smaller winter birds—the fox-colored sparrow, snowbird, crossbill, and sometimes of the chickadee, though he usually tucks his little black cap under his wing in a woodpecker's hole.

"The cheerful little goldfinches, that bend the dried ragweeds."

The meadow-larks always roost upon the ground. They creep well under the grass, or, if the wind is high and it snows, they squat close to the ground behind a tuft of grass or thick bush and sleep while the cold white flakes fall about them. They are often covered before the morning; and when housed thus from the wind and hidden from prowling enemies, no bird could wish for a cozier, warmer, safer bed.

But what a lonely bed it is! Nothing seems

so utterly homeless and solitary as a meadow-lark after the winter nightfall. In the middle of a wide, snow-covered pasture one will occasionally spring from under your feet, scattering the snow that covered him, and go whirring away through the dusk, lost instantly in the darkness—a single little life in the wild, bleak wilderness of winter fields!

Again, the grass is often a dangerous bed. On the day before the great March blizzard of 1888, the larks were whistling merrily from the fences, with just a touch of spring in their call. At noon I noted no signs of storm, but by four o'clock—an hour earlier than usual—the larks had disappeared. They rose here and there from the grass as I crossed the fields, not as they do when feeding, far ahead of me, but close to my feet. They had gone to bed. By early evening the snow began to fall, and for two days continued furiously.

A week later, when the deep drifts melted, I found several larks that had perished from cold or starvation or had smothered under the weight of snow.

There is something of awe in the thought of a

bird nestling close beneath a snow-laden bush in a broad meadow, or clinging fast to a limb in the swaying top of some tall tree, rocked in its great arms through the night by a winter gale. All trees, even the pines and cedars, are fearfully exposed sleeping-places, and death from cold is not infrequent among the birds that take beds in them.

The pine barrens, and especially certain pine clumps along Cohansey Creek and at the head of Cubby Hollow, used to be famous crow-roosts. Thousands of the birds, a few years ago, frequented these pieces of wood in the winter. About the middle of the afternoon, during the severest weather, they begin to fly over to the roost at the head of the Hollow, coming in from the surrounding fields, some of them from miles away, where they have been foraging all day for food. You can tell the character of the weather by the manner of their flight. In the fall and spring they went over cawing, chasing each other and performing in the air; they were happy, and life was as abundant as the spring promise or the autumn fullness everywhere. But in January the land is bare and hard, and life

correspondingly lean and cheerless. You see it in their heavy, dispirited flight; all their spring joyousness is gone; they pass over silent and somber, reluctant to leave the fields, and fearful of the night. There is not a croak as they settle among the pines—scores, sometimes hundreds of them, in a single tree.

Here, in the swaying tops, amid the heavy roar of the winds, they sleep. You need have no fear of waking them as you steal through the shadows beneath the trees. The thick mat of needles or the sifted snow muffles your footfalls; and the winds still the breaking branches and snapping twigs. What a bed in a winter storm! The sky is just light enough for you to distinguish the dim outlines of the sleepers as they rock in the waves of the dark green that rise and fall above you; the trees moan, the branches shiver and creak, and high above all, around and beneath you, filling the recesses of the dark wood rolls the volume of the storm.

But the crows sleep on, however high the winds. They sit close to the branches, that the feathers may cover their clinging feet; they tuck their heads beneath their wing-coverts,

thus protecting the whole body, except one side of the head, which the feathers of the wing cannot quite shelter. This leaves an eye exposed, and this eye, like the heel of Achilles, proves to be the one vulnerable spot. It freezes in very severe weather, causing a slow, painful death. In the morning, after an unusually cold night, you can find dozens of crows flapping piteously about in the trees of the roost and upon the ground, with frozen eyes. In January, 1895, I saw very many of them along the Hollow, blind in one eye or in both eyes, dying of pain and starvation. It was pitiful to see their sufferings. The snow in places was sprinkled with their broken feathers, and with pine-needles which they had plucked off and tried to eat. Nothing could be done for the poor things. I have tried time and again to doctor them; but they were sure to die in the end.

Who has not wondered, as he has seen the red rim of the sun sink down in the sea, where the little brood of Mother Carey's chickens skimming round the vessel would sleep that night? Or who, as he hears the *honking* of geese

overhead in the darkness, has not questioned by what

> . . . plashy brink
> Of weedy lake, or marge of river wide,
> Or where the rocking billows rise and sink
> On the chafed ocean-side,

they will find rest?

In winter, when a heavy southeast wind is blowing, the tides of Delaware Bay are high and the waters very rough. Then the ducks that feed along the reedy flats of the bay are driven into the quieter water of the creeks, and at night fly into the marshes, where they find safe beds in the "salt-holes."

The salt-holes are sheets of water having no outlet, with clean perpendicular sides as if cut out of the grassy marsh, varying in size from a few feet wide to an acre in extent. The sedges grow luxuriantly around their margins, making a thick, low wall in winter, against which the winds blow in vain. If a bird must sleep in the water, such a hole comes as near to being a perfect cradle as anything could be, short of the bottom of a well.

The ducks come in soon after dark. You can hear the whistle of their wings as they pass

just above your head, skimming along the marsh. They settle in a hole, swim close up to the windward shore, beneath the sedges, and, with their heads under their wings, go fast asleep. And as they sleep the ice begins to form—first, along their side of the hole, where the water is calmest; then, extending out around them, it becomes a hard sheet across the surface.

A night that will freeze a salt-hole is not one in which there is likely to be much hunting done by man or beast. But I have been on the marshes such nights, and so have smaller and more justified hunters. It is not a difficult feat to surprise the sleeping ducks. The ice is half an inch thick when you come up, and seals the hole completely, save immediately about the bodies of the birds. Their first impulse, when taken thus at close range, is to dive; and down they go, turning in their tracks.

Will they get out? One may chance to strike the hole which his warm body kept open, as he rises to breathe; but it is more likely that he will come up under the ice, and drown. I have occasionally found a dead duck beneath the ice or floating in the water of a

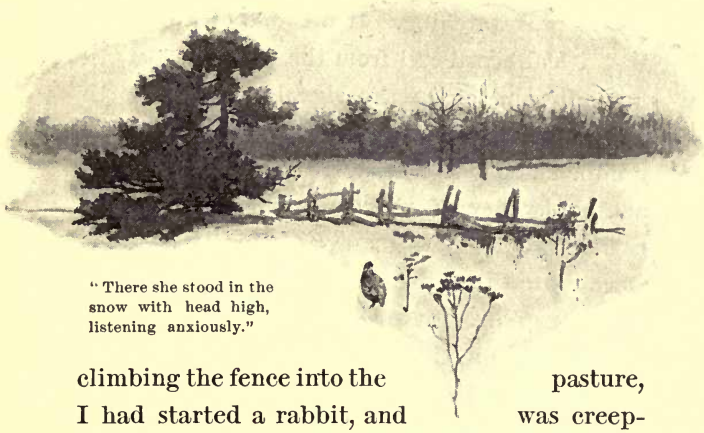
salt-hole. It had been surprised, no doubt, while sleeping, and, diving in fright, was drowned under the ice, which had silently spread like a strange, dreadful covering over its bed.

Probably the life of no other of our winter birds is so full of hardship as is that of the quail, Bob White.

In the early summer the quails are hatched in broods of from ten to twenty, and live as families until the pairing season the next spring. The chicks keep close to the neighborhood of the home nest, feeding and roosting together, under the guidance of the parent birds. But this happy union is soon broken by the advent of the gunning season. It is seldom that a bevy escapes this period whole and uninjured. Indeed, if *one* of the brood is left to welcome the spring it is little less than a miracle.

I have often heard the scattered, frightened families called together after a day of hard shooting; and once, in the old pasture to the north of Cubby Hollow, I saw the bevy assemble.

It was long after sunset, but the snow so diffused the light that I could see pretty well. In



"There she stood in the snow with head high, listening anxiously."

climbing the fence into the pasture, I had started a rabbit, and was creeping up behind a low cedar, when a quail, very near me, whistled softly, *Whirl-ee!* The cedar was between us. *Whirl-ee, whirl-ee-gig!* she whistled again.

It was the sweetest bird-note I ever heard, being so low, so liquid, so mellow that I almost doubted if Bob White could make it. But there she stood in the snow with head high, listening anxiously. Again she whistled, louder this time; and from the woods below came a faint answering call: *White!* The answer seemed to break a spell; and on three sides of me sounded other calls. At this the little signaler repeated her efforts, and each time the answers came louder and nearer. Presently something dark hurried by me over the snow and joined the

quail I was watching. It was one of the covey that I had heard call from the woods.

Again and again the signal was sent forth until a third, fourth, and finally a fifth were grouped about the leader. There was just an audible twitter of welcome and gratitude exchanged as each new-comer made his appearance. Once more the whistle sounded; but this time there was no response across the silent field.

The quails made their way to a thick cedar that spread out over the ground, and, huddling together in a close bunch under this, they murmured something soft and low among themselves and—dreamed.

Some of the family were evidently missing, and I crept away, sorry that even one had been taken from the little brood.

"And—dreamed."

SOME SNUG WINTER BEDS

SOME SNUG WINTER BEDS

IT was a cold, desolate January day. Scarcely a sprig of green showed in the wide landscape, except where the pines stood in a long blur against the gray sky. There was not a sign that anything living remained in the snow-buried fields, nor in the empty woods, shivering and looking all the more uncovered and cold under their mantle of snow, until a solitary crow flapped heavily over toward the pines in search of an early bed for the night.

The bird reminded me that I, too, should be turning toward the pines; for the dull gray afternoon was thickening into night, and my

bed lay beyond the woods, a long tramp through the snow.

As the black creature grew small in the distance and vanished among the trees, I felt a pang of pity for him. I knew by his flight that he was hungry and weary and cold. Every labored stroke of his unsteady wings told of a long struggle with the winter death. He was silent; and his muteness spoke the foreboding and dread with which he faced another bitter night in the pines.

The snow was half-way to my knees; and still another storm was brewing. All day the leaden sky had been closing in, weighed down by the snow-filled air. That hush which so often precedes the severest winter storms brooded everywhere. The winds were in leash—no, not in leash; for had my ears been as keen as those of the creatures about me, I might even now have heard them baying far away to the north. It was not the winds that were still; it was the fields and forests that quailed before the onset of the storm.

I skirted Lupton's Pond and saw the muskrat village, a collection of white mounds out in the

ice, and coming on to Cubby Hollow, I crossed on the ice, ascended the hill, and keeping in the edge of the swamp, left the pines a distance to the left. A chickadee, as if oppressed by the silence and loneliness among the trees, and uneasy in his stout little heart at the threatening storm, flew into the bushes as near to me as he could get, and, apparently for the sake of companionship, followed me along the path, cheeping plaintively.

As I emerged from the woods into a cornfield and turned to look over at the gloomy pines, a snowflake fell softly upon my arm. The storm had begun. Now the half-starved crows came flocking in by hundreds, hurrying to roost before the darkness should overtake them. A biting wind was rising; already I could hear it soughing through the pines. There was something fascinating in the oncoming monster, and backing up behind a corn-shock, I stopped a little to watch the sweep of its white winds between me and the dark, sounding pines.

I shivered as the icy flakes fell thicker and faster. How the wild, unhoused things must suffer to-night! I thought, as the weary pro-

"I shivered as the icy flakes fell thicker and faster."

cession of crows beat on toward the trees. Presently there was a small stir within the corn-shock. I laid my ear to the stalks and listened. Mice! I could hear them moving around in there. It was with relief that I felt that here, at least, was a little people whom the cold and night could not hurt.

These mice were as warmly sheltered inside this great shock as I should be in my furnace-warmed home. Their tiny nests of corn-silk, hidden away, perhaps, within the stiff, empty husks at the shock's very center, could never be wet by a drop of the most driving rain nor reached by the most searching frosts. And not a mouse of them feared starvation. A plenty of nubbins had been left from the husking, and they would have corn for the shelling far into the spring—if the fodder and their homes should be left to them so long.

I floundered on toward home. In the gathering night, amid the swirl of the snow, the shocks seemed like spectral tents pitched up and down some ghostly camp. But the specters and ghosts were all with me, all out in the whirling storm. The mice knew nothing of

wandering, shivering spirits; they nibbled their corn and squeaked in snug contentment; for only dreams of the winter come to them in there.

These shock-dwellers were the common house-mice, *Mus musculus*. But they are not the only mice that have warm beds in winter. In fact, bed-making is a specialty among the mice.

Zapus, the jumping-mouse, the exquisite little fellow with the long tail and kangaroo legs, has made his nest of leaves and grass down in the ground, where he lies in a tiny ball just out of the frost's reach, fast asleep. He will be plowed out of bed next spring, if his nest is in a field destined for corn or melons; for *Zapus* is sure to oversleep. He is a very sound sleeper. The bluebirds, robins, and song-sparrows will have been back for weeks, the fields will be turning green, and as for the flowers, there will be a long procession of them started, before this pretty sleepy-head rubs his eyes, uncurls himself, and digs his way out to see the new spring morning.

Does this winter-long sleep seem to him only as a nap overnight?

Arvicola, the meadow-mouse, that duck-legged, stump-tailed, pot-bellied mouse whose paths you see everywhere in the meadows and fields, stays wide awake all winter. He is not so ten-

The meadow-mouse.

der as *Zapus*. The cold does not bother him; he likes it. Up he comes from his underground nest,—or home, rather, for it is more than a mere sleeping-place,—and runs out into the snow like a boy. He dives and plunges about in the soft white drifts, plowing out roads that

crisscross and loop and lady's-chain and lead nowhere—simply for the fun of it.

Fairies do wonderful things and live in impossible castles; but no fairy ever had a palace in fairy-land more impossible than this unfairy-like meadow-mouse had in my back yard.

One February day I broke through the frozen crust of earth in the garden and opened a large pit in which forty bushels of beets were buried. I took out the beets, and, when near the bottom, I came upon a narrow tunnel running around the wall of the pit like the Whispering Gallery around the dome of St. Paul's. It completely circled the pit, was well traveled, and, without doubt, was the corridor of some small animal that had the great beet-pit for a winter home.

There were numerous dark galleries branching off from this main hallway, piercing out into the ground. Into one of these I put my finger, by way of discovery, thinking I might find the nest. I did find the nest—and more. The instant my finger entered the hole a sharp twinge shot up my arm, and I snatched away my hand with a large meadow-mouse fastened to the end of my finger, and clinging desperately

to her, lo! two baby mice, little bigger than thimbles.

In this mild and even temperature, four feet below the frozen surface of the garden, with never a care as to weather and provisions, dwelt this single family of meadow-mice. What a home it was! A mansion, indeed, with rooms innumerable, and a main hall girdling a very mountain of juicy, sugary beets. This family could not complain of hard times. Besides the beets, the mice had harvested for themselves a number of cribs of clover-roots. These cribs, or bins, were in the shape of little pockets in the walls of the great gallery. Each contained a cupful of the thick, meaty tap-roots of clover, cut into lengths of about half an inch. If the beets should fail (!), or cloy upon them, they had the roots to fall back on.

It was absolutely dark here, and worse; there was no way to get fresh air that I could see. Yet here two baby mice were born in the very dead of winter, and here they grew as strong and warm and happy as they would have grown had the season showered rose-petals instead of snow-flakes over the garden above.

Hesperomys is the rather woodsy name of the white-footed or deer-mouse, a shy, timid little creature dwelling in every wood, who, notwithstanding his abundance, is an utter stranger to most of us. We are more familiar with his tracks, however, than with even those of the squirrel and rabbit. His is that tiny double trail galloped across the snowy paths in the woods. We see them sprinkled over the snow everywhere; but when have we seen the feet that left them? Here goes a line of the wee prints from a hole in the snow near a stump over to the butt of a large pine. Whitefoot has gone for provender to one of his storehouses among the roots of the pine; or maybe a neighbor lives here, and he has left his nest of bird-feathers in the stump to make a friendly call after the storm.

A bed of downy feathers at the heart of a punky old stump beneath the snow would seem as much of a snuggery as ever a mouse could build; but it is not. Instead of a dark, warm chamber within a hollow stump, Whitefoot sometimes goes to the opposite extreme, and climbs a leafless tree to an abandoned bird's nest, and fits this up for his winter home. Down by Cubby

Hollow I found a wood-thrush's nest in a slender swamp-maple, about fifteen feet from the ground. The young birds left it late in June, and when Whitefoot moved in I do not know. But along in the winter I noticed that the nest looked suspiciously round and full, as if it were roofed over. Perhaps the falling leaves had lodged in it, though this was hardly likely. So I went up to the sapling and tapped. My suspicions were correct. After some thumps, a sleepy, frightened face appeared through the side of the nest, and looked cautiously down at me. No one could mistake that pointed nose, those big ears, and the round pop-eyes so nearly dropping out with blinking. It was Whitefoot. I had disturbed his dreams, and he had hardly got his wits together yet, for he had never been awakened thus before. And what could wake him? The black-snakes are asleep, and there is not a coon or cat living that could climb this spindling maple. Free from these foes, Whitefoot has only the owls to fear, and I doubt if even the little screech-owl could flip through these interlaced branches and catch the nimble-footed tenant of the nest.

"It was Whitefoot."

In spite of the exposure this must be a warm bed. The walls are thick and well plastered with mud, and are packed inside with fine, shredded bark which the mouse himself has pulled from the dead chestnut limbs, or, more likely, has taken from a deserted crow's nest. The whole is thatched with a roof of shredded bark, so neatly laid that it sheds water perfectly. The entrance is on the side, just over the edge of the original structure, but so shielded by the extending roof that the rain and snow never beat in. The thrushes did their work well; the nest is securely mortised into the forking branches; and Whitefoot can sleep without a tremor through the wildest winter gale. Whenever the snow falls lightly a high white tower rises over the nest; and then the little haycock, lodged in the slender limbs so far above our heads, is a very castle indeed.

High over the nest of the white-footed mouse, in the stiffened top of a tall red oak that stands on the brow of the hill, swings another winter bed. It is the bulky oak-leaf hammock of the gray squirrel.

A hammock for a winter bed? Is there any-

thing snug and warm about a hammock? Not much, true enough. From the outside the gray squirrel's leaf bed looks like the coldest, deadliest place one could find in which to pass the winter. The leaves are loose and rattle in the wind like the clapboards of a tumble-down house. The limb threatens every moment to toss the clumsy nest out upon the storm. But the moorings hold, and if we could curl up with the sleeper in that swaying bed, we should rock and dream, and never feel a shiver through the homespun blankets of chestnut bark that wrap us round inside the flapping leaves.

Be it never so cozy, a nest like this is far from a burrow—the bed of a fat, thick-headed dolt who sleeps away the winter. A glance into the stark, frozen top of the oak sends over us a chill of fright and admiration for the dweller up there. He cannot be an ease-lover; neither can he know the meaning of fear. We should as soon think of a sailor's being afraid of the shrieking in the rigging overhead, as of this bold squirrel in the tree-tops dreading any danger that the winter winds might bring.

There are winters when the gray squirrel

"From his leafless height he looks down into the Hollow."

stays in the hollow of some old tree. A secure and sensible harbor, this, in which to weather the heavy storms, and I wonder that a nest is ever anchored outside in the tree-tops. The woodsmen and other wiseacres say that the squirrels never build the tree-top nests except in anticipation of a mild winter. But weather wisdom, when the gray squirrel is the source, is as little wise as that which comes from Washington or the almanac. I have found the nests in the tree-tops in the coldest, fiercest winters.

It is not in anticipation of fine weather, but

a wild delight in the free, wild winter, that leads the gray squirrel to swing his hammock from the highest limb of the tallest oak that will hold it. He dares and defies the winds, and claims their freedom for his own. From his leafless height yonder he looks down into the Hollow upon the tops of the swamp trees where his dizzy roads run along the angled branches, and over the swamp to the dark pines, and over the pines, on, on across the miles of white fields which sweep away and away till they freeze with the frozen sky behind the snow-clouds that drift and pile. In his aery he knows the snarl and bite of the blizzard; he feels the swell of the heaving waves that drive thick with snow out of the cold white north. Anchored far out in the tossing arms of the strong oak, his leaf nest rocks in the storm like a yawl in a heaving sea.

But he loves the tumult and the terror. A night never fell upon the woods that awed him; cold never crept into the trees that could chill his blood; and the hoarse, mad winds that swirl and hiss about his pitching bed never shook a nerve in his round, beautiful body. How he must sleep! And what a constitution he has!

"MUS' RATTIN'"

"Uncle Jethro limbered his stiffened knees and went chuckling down the bank."

"MUS' RATTIN'"

ONE November afternoon I found Uncle Jethro back of the woodshed, drawing a chalk-mark along the barrel of his old musket, from the hammer to the sight.

"What are you doing that for, Uncle Jeth?" I asked.

"What fo'? Fo' mus'rats, boy."

"Muskrats! Do you think they 'll walk up and toe that mark, while you knock 'em over with a stick?"

"G'way fum yhere! What I take yo' possumin' des dozen winters fo', en yo' dunno how to sight a gun in de moon yit? I 's gwine mus'rattin' by de moon to-night, en I won't take yo' nohow."

Of course he took me. We went out about nine o'clock, and entering the zigzag lane behind the barn, followed the cow-paths down to the pasture, then cut across the fields to Lup-

ton's Pond, the little wood-walled lake which falls over a dam into the wide meadows along Cohansey Creek.

It is a wild, secluded spot, so removed that a pair of black ducks built their nest for several springs in the deep moss about the upper shore.

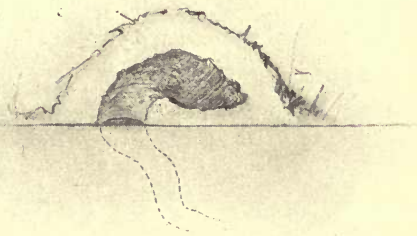
It is shallow and deeply crusted over with lily-pads and pickerel-weed, except for a small area about the dam, where the water is deep and clear. There are many stumps in the upper end; and here, in the shallows, built upon the hummocks or anchored to the submerged roots, are the muskrats' houses.

The big moon was rising over the meadows as we tucked ourselves snugly out of sight in a clump of small cedars on the bank, within easy range of the dam and commanding a view of the whole pond. The domed houses of the muskrats—the village numbered six homes—showed plainly as the moon came up; and when the full flood of light fell on the still surface of the pond, we could see the "roads" of the muskrats, like narrow channels, leading down through the pads to the open space about the dam.

"The big moon was rising over the meadows."

A muskrat's domestic life is erratic. Sometimes there will be a large village in the pond, and, again, an autumn will pass without a single new house being built. It may be that some of the old houses will be fitted up anew and occupied; but I have known years when there was not a house in the pond. At no time do all of the muskrats build winter houses. The walls of the meadow ditches just

under the dam are honeycombed with subterranean passages, in which many of the muskrats live the year round. Neither food nor weather, so far as I have found, influence them at all in the choice of their winter quarters. In low, wet meadows where there are no



Section of muskrat's house.

ditches, the muskrats, of course, live altogether in mud and reed houses above ground, for the water would flood the ordinary burrow. These structures are placed on the tussocks along a water-hole, so that the dwellers can dive out and escape under water when danger approaches. But here in the tide-meadows, where the ditches are deep, the muskrats rear their families almost wholly in underground

rooms. It is only when winter comes, and family ties dissolve, that a few of the more sociable or more adventurous club together, come up to the pond, and while away the cold weather in these haystack lodges.

These houses are very simple, but entirely adequate. If you will lift the top off an ordinary meadow lodge you will find a single room, with a bed in the middle, and at least one entrance and one exit which are always closed to outsiders by water.

The meadow lodge is built thus: The muskrat first chooses a large tussock of sedge that stands well out of the water for his bedstead. Now, from a foundation below the water, thick walls of mud and grass are erected inclosing the tussock; a thatch of excessive thickness is piled on; the channels leading away from the doors are dug out if necessary; a bunch of soaking grass is brought in and made into a bed on the tussock—and the muskrat takes possession.

The pond lodges at the head of Lupton's are made after this fashion, only they are much larger, and instead of being raised about a tus-

sock of sedge, they are built upon, and inclose, a part of a log or stump.

This lodge life is surely a cozy, jolly way of passing the winter. The possums are inclined to club together whenever they can find stumps that are roomy enough; but the muskrats habitually live together through the winter. Here, in the single room of their house, one after another will come, until the walls can hold no more; and, curling up after their night of foraging, they will spend the frigid days blissfully rolled into one warm ball of dreamful sleep. Let it blow and snow and freeze outside; there are six inches of mud-and-reed wall around them, and, wrapped deep in rich, warm fur, they hear nothing of the blizzard and care nothing for the cold.

Nor are they prisoners of the cold here. The snow has drifted over their house till only a tiny mound appears; the ice has sealed the pond and locked their home against the storm and desolation without: but the main roadway from the house is below the drifting snow, and they know where, among the stumps and button-bushes, the warm-nosed watchers have kept

breathing-holes open. The ice-maker never finds their inner stair; its secret door opens into deep, under-water paths, which run all over the bottom of the unfrozen pond-world.

"The snow has drifted over their house till only a tiny mound appears."

Unless roused by the sharp thrust of a spear, the muskrats will sleep till nightfall. You may skate around the lodge and even sit down upon it without waking the sleepers; but plunge your polo-stick through the top, and you will

hear a smothered *plunk, plunk, plunk,* as one after another dives out of bed into the water below.

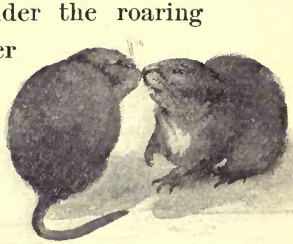
The moon climbed higher up the sky and the minutes ran on to ten o'clock. We waited. The night was calm and still, and the keen, alert air brought every movement of the wild life about us to our ears. The soft, cottony footfalls of a rabbit, hopping leisurely down the moonlit path, seemed not unlike the echoing steps on silent, sleeping streets, as some traveler passes beneath your window; a wedge of wild geese *honked* far over our heads, holding their mysterious way to the South; white-footed mice scurried among the dried leaves; and our ears were so sharpened by the frosty air that we caught their thin, wiry squeaks.

Presently there was a faint plash among the muskrat houses. The village was waking up. Uncle Jethro poked the long nose of his gun cautiously through the bushes, and watched. Soon there was a wake in one of the silvery roads, then a parting of waves, and stemming silently and evenly toward us, we saw the round, black head of a muskrat.

It was a pretty sight and a pretty shot; but I would not have had the stillness and the moonlit picture spoiled by the blare of that murderous musket for the pelts of fifty muskrats, and as the gun was coming to Uncle Jethro's shoulder, I slipped my hand under the lifted hammer.

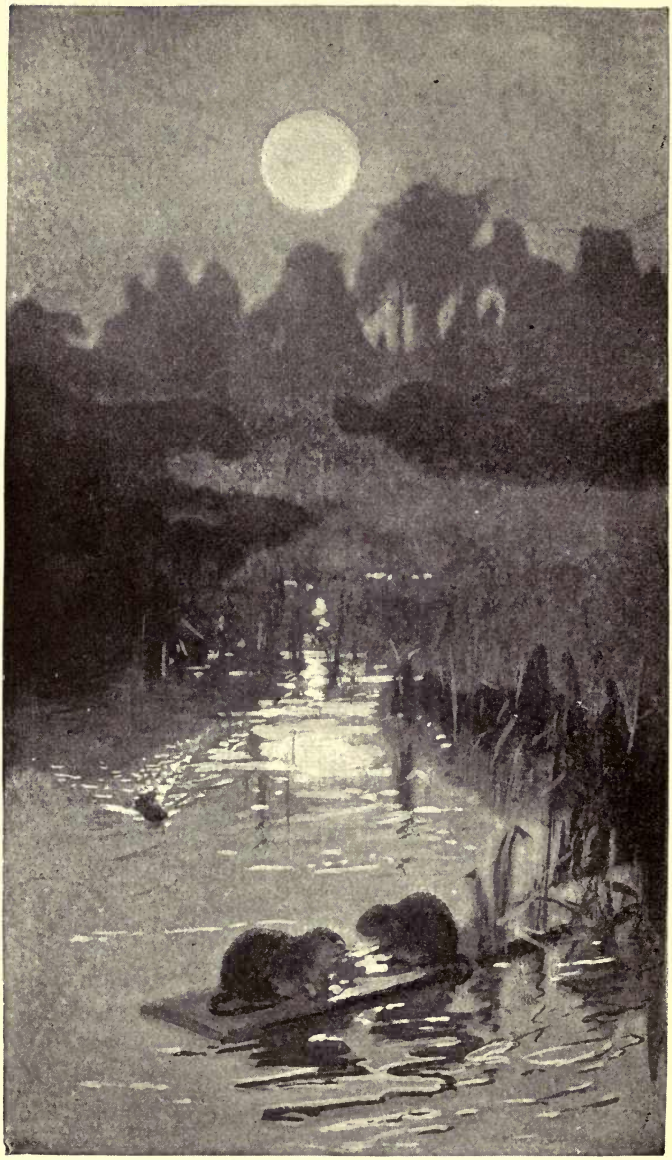
With just an audible grunt of impatience the old negro understood,—it was not the first good shot that my love of wild things had spoiled for him,—and the unsuspecting muskrat swam on to the dam.

A plank had drifted against the bank, and upon this the little creature scrambled out, as dry as the cat at home under the roaring kitchen stove. Down another road came a second muskrat, and, swimming across the open water at the dam, joined the first-comer on the plank. They rubbed noses softly—the sweetest of all wild-animal greetings—and a moment afterward began to play together.



"They rubbed noses."

They were out for a frolic, and the night was



"Two little brown creatures washing calamus."

splendid. Keeping one eye open for owls, they threw off all other caution, and swam and dived and chased each other through the water, with all the fun of boys in swimming.

On the bottom of the pond about the dam, in ten or twelve feet of water, was a bed of unios. I knew that they were there, for I had cut my feet upon them; and the muskrats knew they were there, for they had had many a moonlight lunch of them. These mussels the muskrats reckon sweetmeats. They are hard to get, hard to crack, but worth all the cost. I was not surprised, then, when one of the muskrats sleekly disappeared beneath the surface, and came up directly with a mussel.

There was a squabble on the plank, which ended in the other muskrat's diving for a mussel for himself. How they opened them I could not clearly make out, for the shells were almost concealed in their paws; but judging from their actions and the appearance of other shells which they had opened, I should say that they first gnawed through the big hinge at the back, then pried open the valves, and ate out the contents.

Having finished this first course of big-neck clams, they were joined by a third muskrat, and, together, they filed over the bank and down into the meadow. Shortly two of them returned with great mouthfuls of the mud-bleached ends of calamus-blades. Then followed the washing.

They dropped their loads upon the plank, took up the stalks, pulled the blades apart, and soused them up and down in the water, rubbing them with their paws until they were as clean and white as the whitest celery one ever ate. What a dainty picture! Two little brown creatures, humped on the edge of a plank, washing calamus in moonlit water!

One might have taken them for half-grown coons as they sat there scrubbing and munching. Had the big barred owl, from the gum-swamp down the creek, come along then, he could easily have bobbed down upon them, and might almost have carried one away without the other knowing it, so all-absorbing was the calamus-washing.

Muskrats, like coons, will wash what they eat, whether washing is needed or not. It is a

necessary preliminary to dinner—their righteousness, the little Pharisees! Judging from the washing disease which ailed two tame muskrats that I knew, it is perfectly safe to say that had these found clean bread and butter upon the plank, instead of muddy calamus, they would have scoured it just the same.

Before the two on the plank had finished their meal, the third muskrat returned, dragging his load of mud and roots to the scrubbing. He was just dipping into the water when there was a terrific explosion in my ears, a roar that echoed round and round the pond. As the smoke lifted, there were no washers upon the plank: but over in the quiet water floated three long, slender tails.

"No man gwine stan' dat shot, boy, jis t' see a mus'rat wash hi' supper"; and Uncle Jethro limbered his stiffened knees and went chuckling down the bank.

FEATHERED NEIGHBORS

FEATHERED NEIGHBORS

I

THE electric cars run past my door, with a switch almost in front of the house. I can hear a car rumbling in the woods on the west, and another pounding through the valley on the east, till, shrieking, groaning, crunching, crashing, they dash into view, pause a moment on the switch, and thunder on to east and west till out of hearing. Then, for thirty minutes, a silence settles as deep as it lay here a century

ago. Dogs bark; an anvil rings; wagons rattle by; and children shout about the cross-roads. But these sounds have become the natural voices of the neighborhood—mother-tongues like the chat of the brook, the talk of the leaves, and the caw of the crows. And these voices, instead of disturbing, seem rather to lull the stillness.

But the noise of the cars has hardly died away, and the quiet come, when a long, wild cry breaks in upon it. *Yarup! yarup! yarup-up-up-up-up!* in quick succession sounds the call, followed instantly by a rapid, rolling beat that rings through the morning hush like a reveille with bugle and drum.

It is the cry of the "flicker," the "high-hole." He is propped against a pole along the street railroad, nearly a quarter of a mile away. He has a hole in this pole, almost under the iron arm that holds the polished, pulsing wire for the trolley. It is a new house, which the bird has been working at for more than a week, and it must be finished now, for this lusty call is an invitation to the warming. I shall go, and, between the passing of the cars, witness the

bowing, the squeaking, the palaver. A high-hole warming is the most utterly polite function in birddom.

Some of my friends were talking of birds, not long ago, when one of them turned to me and said hopelessly:

"'T is no use. We can't save them even if we do stop wearing them upon our hats. Civilization is bound to sweep them away. We shall be in a birdless world pretty soon, in spite of laws and Audubon societies."

I made no reply, but, for an answer, led the way to the street and down the track to this pole which High-hole had appropriated. I pointed out his hole, and asked them to watch. Then I knocked. Instantly a red head appeared at the opening. High-hole was mad enough to eat us; but he changed his mind, and, with a bored, testy flip, dived into the woods. He had served my purpose, however, for his red head sticking out of a hole in a street-railway pole was as a rising sun in the east of my friends' ornithological world. New light broke over this question of birds and men. The cars drive High-hole away? Not so

long as cars run by overhead wires on wooden poles.

High-hole is a civilized bird. Perhaps "domesticated" would better describe him; though domesticated implies the purposeful effort of man to change character and habits, while the changes which have come over High-hole—and over most of the wild birds—are the result of High-hole's own free choosing.

If we should let the birds have their way they would voluntarily fall into civilized, if not into domesticated, habits. They have no deep-seated hostility toward us; they have not been the aggressors in the long, bitter war of extermination; they have ever sued for peace. Instead of feeling an instinctive enmity, the birds are drawn toward us by the strongest of interests. If nature anywhere shows us her friendship, and her determination, against all odds, to make that friendship strong, she shows it through the birds. The way they forgive and forget, their endless efforts at reconciliation, and their sense of obligation, ought to shame us. They sing over every acre that we reclaim, as if we had saved it for them only;

and in return they probe the lawns most diligently for worms, they girdle the apple-trees for grubs, and gallop over the whole wide sky

"They probe the lawns most diligently for worms."

for gnats and flies—squaring their account, if may be, for cherries, orchards, and chimneys.

The very crows, in spite of certain well-founded fears, look upon a new farm—not upon the farmer, perhaps—as a godsend. In the cold and poverty of winter, not only the crows, but the jays, quails, buntings, and sparrows, help themselves, as by right, from our shocks and cribs. Summer and winter the birds find food so much more plentiful about the farm and village, find living in all respects so much easier and happier here than in remote, wild regions,

"Even he loves a listener."

that, as a whole, they have become a suburban people.

But life is more than meat for the birds. There is a subtle yet real attraction for them in human society. They like its stir and change, its attention and admiration. The shyest and most modest of the birds pines for appreciation. The cardinal grosbeak, retiring as he is, cannot believe that he was born to blush unseen—to the tip of his beautiful crest. And the hermit-thrush, meditative, spiritual, and free as the heart of the swamp from worldliness—even he loves a listener, and would not waste his sweetness any longer on desert forest air. I do not know a single bird who does not prefer a wood with a wagon-road through it.

My friends had smiled at such assertions before their introduction to the bird in the pole. They knew just enough of woodpeckers to expect High-hole to build in the woods, and, when driven from there, to disappear, to extinguish himself, rather than stoop to an existence within walls of hardly the dignity and privacy of a hitching-post.

He is a proud bird and a wild bird, but a

practical, sensible bird withal. Strong of wing and mighty of voice, he was intended for a vigorous, untamed life, and even yet there is the naked savage in his bound and his whoop. But electric cars have come, with smooth-barked poles, and these are better than rotten trees, despite the jangle and hum of wires and the racket of grinding wheels. Like the rest of us, he has not put off his savagery: he has simply put on civilization. Street cars are a convenience and a diversion. He has wings and wildest freedom any moment, and so, even though heavy timber skirts the track and shadows his pole, and though across the road opposite stands a house where there are children, dogs, and cats, nevertheless, High-hole follows his fancy, and instead of building back in the seclusion and safety of the woods, comes out to the street, the railroad, the children, and the cats, and digs him a modern house in this sounding cedar pole.

Perhaps it is imagination, but I think that I can actually see High-hole changing his wood ways for the ways of the village. He grows tamer and more trustful every summer.

A pair have their nest in a telegraph-pole near the school-house, where they are constantly mauled by the boys. I was passing one day when two youngsters rushed to the pole and dragged out the poor harassed hen for my edification. She was seized by one wing, and came out flapping, her feathers pulled and splintered. She had already lost all but two quills from her tail through previous exhibitions. I opened my hands, and she flew across the pasture to the top of a tree, and waited patiently till we went

"She flew across the pasture."

away. She then returned, knowing, apparently, that we were boys and a necessary evil of village life.

But this pole-life marks only half the distance that these birds have come from the woods.

One warm Sunday of a recent March, in the middle of my morning sermon, a ghostly rapping was heard through the meeting-house. I paused. *Tap, tap, tap!* hollow and ominous it echoed. Every soul was awake in an instant. Was it a summons from—? But two of the small boys grinned; some one whispered "flicker"; and I gathered my ornithological wits together in time to save the pause and proceed with the service.

After the people went home I found three flicker-holes in the latticework over the north windows. One of last year's tenants had got back that morning from the South, and had gone to work cleaning up and putting things to rights in his house, regardless of Sabbath and sermon.

This approach of the flicker to domestic life and human fellowship is an almost universal movement among the birds. And no tendency anywhere in wild life is more striking. The four-footed animals are rapidly disappearing

before the banging car and spreading town, yet the birds welcome these encroachments and thrive on them. One never gets used to the contrast in the bird life of uninhabited places with that about human dwellings. Thoreau tells his wonder and disappointment at the dearth of birds in the Maine woods; Burroughs reads about it, and goes off to the mountains, but has himself such an aggravated shock of the same surprise that he also writes about it. The few hawks and rarer wood species found in these wild places are shy and elusive. More and more, in spite of all they know of us, the birds choose our proximity over the wilderness. Indeed, the longer we live together, the less they fear and suspect us.

II

Using my home for a center, you may describe a circle of a quarter-mile radius and all the way round find that radius intersecting either a house, a dooryard, or an orchard. Yet within this small and settled area I found one summer thirty-six species of birds nesting. Can any

"A very ordinary New England 'corner.'"

cabin in the Adirondacks open its window to more voices—any square mile of solid, unhacked forest on the globe show richer, gayer variety of bird life?

The nightingale, the dodo, and the ivorybill were not among these thirty-six. What then? If one can live on an electric-car line, inside the borders of a fine city, have his church across the road, his blacksmith on the corner, his neighbors within easy call, and, with all this, have any thirty-six species of birds nesting within ear-shot, ought he to ache for the Archæopteryx, or rail at civilization as a destroyer?

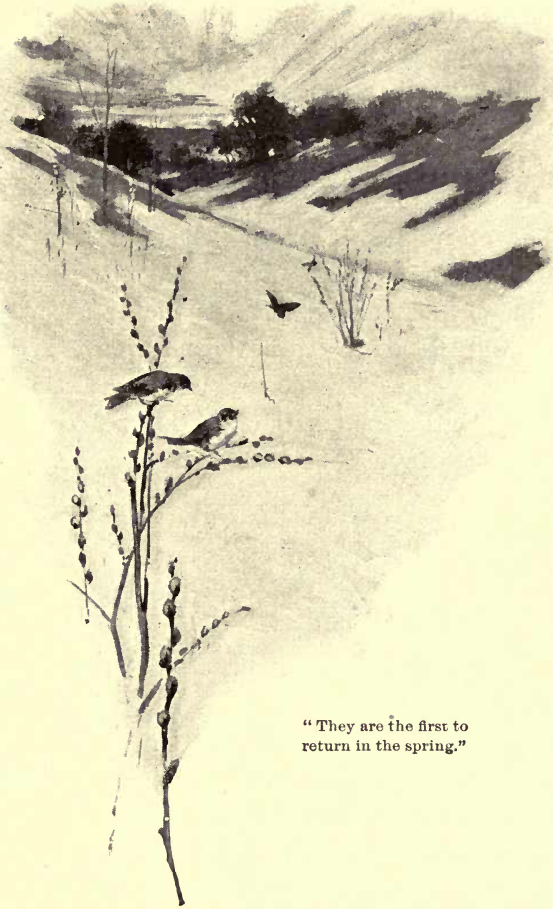
There is nothing remarkable about this bit of country. I could plant myself at the center of such a circle anywhere for miles around and find just as many birds. Perhaps the land is more rocky and hilly, the woods thicker, the gardens smaller here than is common elsewhere in eastern Massachusetts; otherwise, aside from a gem of a pond, this is a very ordinary New England "corner."

On the west side of my yard lies a cultivated field, beyond which stands an ancient apple orchard; on the east the yard is hedged by a

tract of sprout-land which is watched over by a few large pines; at the north, behind the house and garden, runs a wall of chestnut and oak, which ten years ago would have been cut but for some fortunate legal complication. Such is the character of the whole neighborhood. Patches of wood and swamp, pastures, orchards, and gardens, cut in every direction by roads and paths, and crossed by one tiny stream—this is the circle of the thirty-six.

Not one of these nests is beyond a stone's throw from a house. Seven of them, indeed, are in houses or barns, or in boxes placed about the dooryards; sixteen of them are in orchard trees; and the others are distributed along the roads, over the fields, and in the woods.

Among the nearest of these feathered neighbors is a pair of bluebirds with a nest in one of the bird-boxes in the yard. The bluebirds are still untamed, building, as I have often found, in the wildest spots of the woods; but seen about the house, there is something so reserved, so gentle and refined in their voice and manner as to shed an atmosphere of good breeding about the whole yard. What a contrast they are to



"They are the first to return in the spring."

the English sparrows! What a rebuke to city manners!

They are the first to return in the spring; the spring, rather, comes back with them. They are its wings. It could not come on any others. If it tried, say, the tanager's, would we believe and accept it? The bluebird is the only possible interpreter of those first dark signs of March; through him we have faith in the glint of the pussy-willows, in the half-thawed peep of the hylas, and in the northward flying of the geese. Except for his return, March would be the one month of all the twelve never looked at from the woods and waysides. He comes, else we should not know that the waters were falling, that a leaf could be plucked in all the bare, muddy world.

Our feelings for the bluebird are much mixed. His feathers are not the attraction. He is bright, but on the whole rather plainly dressed. Nor is it altogether his voice that draws us; the snowflakes could hardly melt into tones more mellow, nor flecks of the sky's April blue run into notes more limpid, yet the bluebird is no singer. The spell is in the spirit of the

bird. He is the soul of this somber season, voicing its sadness and hope. What other bird can take his place and fill his mission in the heavy, hopeful days of March? We are in no mood for gaiety and show. Not until the morning stars quarrel together will the cat-bird or scarlet tanager herald the spring. The irreverent song of a cat-bird in the gray gloom of March would turn the spring back and draw the winter out of his uncovered grave. The bluebird comes and broods over this death and birth, until the old winter sleeps his long sleep, and the young spring wakes to her beautiful life.

Within my house is another very human little bird—the chimney-swallow. Sharing our very firesides as he does, he surely ought to have a warm place in our hearts; but where have I ever read one word expressing the affection for him that is universally shown the bluebird?

I am thinking of our American swallow. We all know how Gilbert White loved his chimney-swallows—how he loved every creature that flew or crawled about the rectory. Was it an ancient tortoise in the garden? the sheep upon the downs? a brood of birds in the chimney?

"Where the dams are hawking for flies."

No matter. Let the creatures manifest never so slight a friendliness for him, let them claim never so little of his protection, and the good rector's heart went out toward them as it might toward children of his own.

But the swallows were White's fondest care. He and his hirundines were inseparable. He thought of them, especially those of the chimney, as members of his household. One can detect almost a father's interest and joy in his notes upon these little birds. Listen to the parent in this bit about the young in Letter XVIII. They are just out of the chimney.

"They play about near the place where the dams are hawking for flies; and when a mouthful is collected, at a certain signal given, the dam and the nestling advance, rising toward each other, and meeting at an angle; the young one all the while uttering such a little quick note of gratitude and complacency that a person must have paid very little regard to the wonders of nature that has not often remarked this feat."

Has anything been written about our swift showing as faithful and sympathetic observation as that? No. He comes and goes without any

one, like Gilbert White, being cheered by his twitter or interested in his doings. Perhaps it is because we have so many brighter, sweeter birds about us here; or perhaps our chimneys are higher than those of Selborne Rectory; or maybe we have no Gilbert White over here.

Of course we have no Gilbert White. We have not had time to produce one. The union of man and nature which yields the naturalist of Selborne is a process of time. Our soil and our sympathy are centuries savager than England's. We still look at our lands with the spirit of the ax; we are yet largely concerned with the contents of the gizzards of our birds. Shall the crows and cherry-birds be exterminated? the sparrows transported? the owls and hawks put behind bars? Not until the collectors at Washington pronounce upon these first questions can we hope for a naturalist who will find White's wonders in the chimney-swallow.

These little swifts are not as attractive as song-sparrows. They are sooty—worse than sooty sometimes; their clothes are too tight for them; and they are less musical than a small

boy with "clappers." Nevertheless I could ill spare them from my family. They were the first birds I knew, my earliest home being so generous in its chimneys as to afford lodgings to several pairs of them. This summer they again share my fireside, squeaking, scratching, and thundering in the flue as they used to when, real goblins, they came scrambling down to peek and spy at me. I should miss them from the chimney as I should the song-sparrows from the meadow. They are above the grate, to be sure, while I am in front of it; but we live in the same house, and there is only a wall between us.

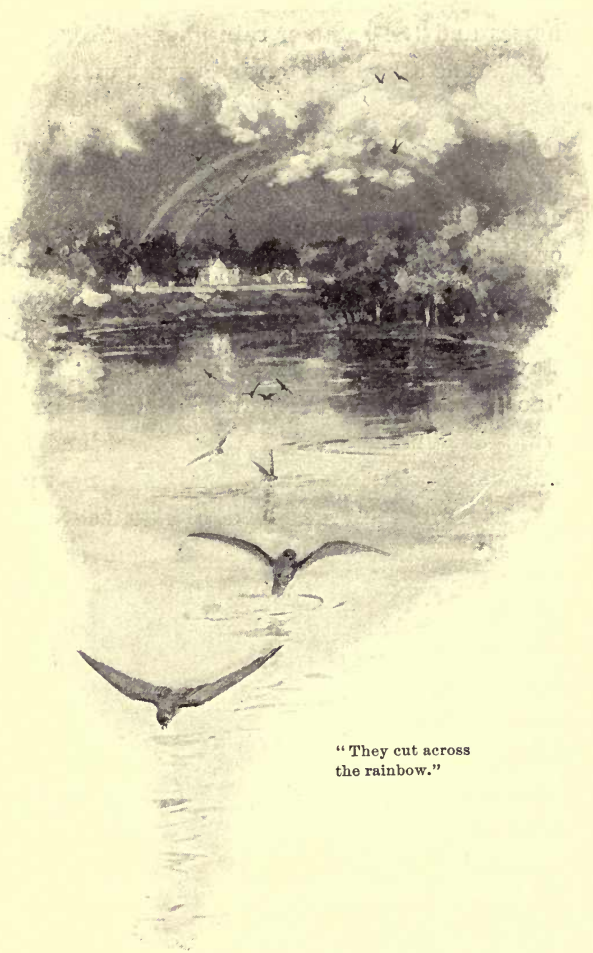
If the chimney would be a dark, dead hole without the swifts, how empty the summer sky would be were they not skimming, darting, wiggling across every bright hour of it! They are tireless fliers, feeding, bathing, love-making, and even gathering the twigs for their nests on the wing, never alighting, in fact, after leaving the chimney until they return to it. They rest while flying. Every now and then you will see them throw their wings up over their heads till the tips almost touch, and, in twos or threes,

scale along to the time of their jolly, tuneless rattle.

From May to September, is there a happier sight than a flock of chimney-swallows, just before or just after a shower, whizzing about the tops of the corn or coursing over the river, like so many streaks of black lightning, ridding the atmosphere of its overcharge of gnats! They cut across the rainbow and shoot into the rose- and pearl-washed sky, and drop—into the depths of a soot-clogged chimney!

These swallows used to build in caves and in clean, hollow trees; now they nest only in chimneys. So far have they advanced in civilization since the landing of the Pilgrims!

Upon the beams in the top of the barn the brown-breasted, fork-tailed barn-swallows have made their mud nests for years. These birds are wholly domesticated. We cannot think of them as wild. And what a place in our affections they have won! If it is the bluebirds that bring the spring, the barn-swallows fetch the summer. They take us back to the farm. We smell the hay, we see the cracks and knot-holes of light cutting through the fragrant



"They cut across
the rainbow."

gloom of the mows, we hear the munching horses and the summer rain upon the shingles, every time a barn-swallow slips past us.

For grace of form and poetry of motion there is no rival for the barn-swallow. When on wing, where else, between the point of a beak and the tips of a tail, are there so many marvelous curves, such beautiful balance of parts? On the wing, I say. Upon his feet he is as awkward as the latest Herreshoff yacht upon the stays. But he is the yacht of the air. Every line of him is drawn for racing. The narrow, wide-reaching wings and the long, forked tail are the perfection of lightness, swiftness, and power. A master designed him—saved every possible feather's weight, bent from stem to stern, and rigged him to outsail the very winds.

From the barn to the orchard is no great journey; but it is the distance between two bird-lands. One must cross the Mississippi basin, the Rocky Mountains, or the Pacific Ocean to find a greater change in bird life than he finds in leaping the bars between the yard and the orchard.

A bent, rheumatic, hoary old orchard is na-

"The barn-swallows fetch the summer."

ture's smile in the agony of her civilization. Men may level the forests, clear the land and fence it; but as long as they plant orchards, bird life, at least, will survive and prosper.

"From the barn to the orchard."

Except for the warblers, one acre of apple-trees is richer in the variety of its birds than ten acres of woods. In the three unkempt, decrepit orchards hereabout, I found the robin, chippy, orchard-oriole, cherry-bird, king-bird, crow-blackbird, bluebird, chebec, tree-swallow, flicker, downy woodpecker, screech-owl, yellow warbler, redstart, and great-crested flycatcher —all nesting as rightful heirs and proprietors.

This is no small share of the glory of the whole bird world.

I ought not to name redstart as a regular occupant of the orchard. He belongs to the woods, and must be reckoned a visitor to the apple-trees, only an occasional builder, at best. The orchard is too open for him. He is an actor, and needs a leafy setting for his stage. In the woods, against a dense background of green, he can play butterfly with charming effect, can spread himself and flit about like an autumn leaf or some wandering bit of paradise life, with wings of the grove's richest orange light and its deepest shadow.

When, however, he has a fancy for the orchard, this dainty little warbler shows us what the wood-birds can do in the way of friendship and sociability.

Across the road, in an apple-tree whose branches overhang a kitchen roof, built a pair of redstarts. No one discovered the birds till the young came; then both parents were seen about the yard the whole day long. They were as much at home as the chickens, even more familiar. Having a leisure moment one day,

"Across the road, in an apple-tree, built a pair of redstarts."

when a bicycle was being cleaned beneath the tree, the inquisitive pair dropped down, the female actually lighting upon the handle-bar to see how the dusting was done. On another occasion she attempted to settle upon the baby swinging under the tree in a hammock; and again, when I caught one of her own babies in

my hands, she came, bringing a worm, and, without the slightest fear of me, tried to feed it. Yet she was somewhat daunted by the trap in which her infant was struggling; she would fan my hands with her wings, then withdraw, not able to muster quite enough courage to settle upon them.

Neither of these birds ever showed alarm at the people of the house. In fact, I never saw a redstart who seemed to know that we humans ought to be dreaded. These birds are now as innocent of suspicion as when they came up to Adam to be named. On two occasions, during severe summer storms, they have fluttered at my windows for shelter, and dried their feathers, as any way-worn traveler might, in safety beneath my roof.

From the window one morning I saw Chebec, the least flycatcher, light upon the clothesline. She teetered a moment, balancing her big head by her loosely jointed tail, then leaped lightly into the air, turned,—as only a flycatcher can,—and, diving close to the ground, gathered half the gray hairs of a dandelion into her beak, and darted off. I followed instantly, and

soon found her nest in one of the orchard trees. It was not quite finished; and while the bird was gone for more of the dandelion down, I climbed up and seated myself within three feet of the nest.

Back came Mrs. Chebec with a swoop, but, on seeing me, halted short of the nest. I was motionless. Hopping cautiously toward the nest, she took an anxious look inside; finding nothing disturbed, she concluded that there was no evil in me, and so went on with her interesting work. It was a pretty sight. In a quiet, capable, womanly way she laid the lining in, making the nest, in her infinite mother-love, fit for eggs with shells of foam.

The chebec is a finished architect. Better builders are few indeed. The humming-bird is slower, more painstaking, and excels Chebec in outside finish. But Chebec's nest is so deep, so soft, so round and hollow! There is the loveliness of pure curve in its walls. And small wonder! She bends them about the beautiful mold of her own breast. Whenever she entered with the dandelion cotton, she went round and round these walls, before leaving, pressing them fondly

with her chin close against her breast. She could not make them sufficiently safe nor half lovely enough for the white, fragile treasures to be cradled there.

Artists though they be, the chebecs, nevertheless, are very tiresome birds. They think that they can sing—a sad, sorry, maddening mistake. Mr. Chapman says the day that song was distributed among the birds the chebecs sat on a back seat. Would they had been out

"Gathered half the gray hairs of a dandelion into her beak."

catching flies! In the chatter of the English sparrow, no matter how much I may resent his

impudence and swagger, there is something so bright and lively that I never find him really tiresome. But the chebecs come back very early in spring, and sit around for days and days, catching flies, and jerking their heads and calling, *Chebec! chebec! chebec!* till you wish their heads would snap off.

In the tree next to the chebec's was a brood of robins. The crude nest was wedged carelessly into the lowest fork of the tree, so that the cats and roving boys could help themselves without trouble. The mother sputtered and worried and scolded without let-up, trying to make good her foolishness in fixing upon such a site by abundance of anxiety and noise.

The fussiest, least sensible mother among the birds is the robin. Any place for her nest but a safe one! The number of young robins annually sacrificed to pure parental carelessness is appalling. The female chooses the site for the home, and her ability for blundering upon unattractive and exposed locations amounts to genius. She insists upon building on the sand. Usually the rain descends, the floods come, the winds blow, and there is a fall.

"In the tree next to the chebec's was a brood of robins. The crude nest was wedged carelessly into the lowest fork of the tree, so that the cats and roving boys could help themselves without trouble."

Here is a pair building upon a pile of boards under a cherry-tree; another pair plaster their nest to the rider of an old worm-fence; while a third couple, abandoning the woods near by, plant theirs, against all remonstrance, upon the top of a step-ladder that the brickmakers use daily in their drying-sheds.

It was the superlative stupidity of this robin that saved her family. The workmen at first knocked her nest off to the ground. She had plenty of clay at hand, however, and began her nest again, following the ladder as it moved about the shed. Such amazing persistence won, of course. Out of wonder, finally, the men gave the ladder over to her and stood aside till her family affairs were attended to. Everything was right in time. After infinite scolding, she at last came off in triumph, with her brood of four.

A striking illustration of this growing alliance between us and the birds is the nest of the great-crested flycatcher in the orchard. Great-crest has almost become an orchard-bird. At heart he is, and ever will be, a bird of the wilds. He is not tame—does not want to be tame; he is

bold, and the dangers and advantages of orchard life attract him. His moving into an apple orchard is no less a wonder than would be an Apache chief's settling in New York or Boston.

Most observers still count Great-crest among the wild and unreclaimed. Florence A. Merriam, speaking of his return in spring, says: "Not many days pass, however, before he is so taken up with domestic matters that his voice is rarely heard outside the woods"; and in Stearns's "Birds" I find: "It does not court the society of man, but prefers to keep aloof in the depths of the forest, where it leads a wild, shy, and solitary life." This is not Great-crest as I know him. I have found many of his nests, and never one in any but orchard trees. Riding along a country road lately, I heard Great-crest's call far ahead of me. I soon spied him on the wires of a telegraph-pole. Under him was a pear-tree, and a hundred yards away a farm-house. In the pear-tree I found his nest—snake-skins and all.

I disagree, too, with most descriptions of this bird's cry. The authors I have read seem never to have heard him on a quiet May morning

" I soon spied him on the wires of a telegraph-pole."

across a fifty-acre field. His voice is "harsh and discordant" when sounded into one's very ears. The sweetest-toned organ would be discordant to one inside the instrument. Give the bird the room he demands,—wide, early-morning fields,—and listen. A single shout, almost human it seems, wild, weird, and penetrating, yet clear and smooth as the blast of a bugle. One can never forget it, nor resist it; for it thrills like a resurrection call—the last, long summons to the spring waking. This solitary note is often repeated, but is never so rapid nor so long drawn out as the call of the flicker.

Great-crest is a character, one of the most individual of all our birds. What other bird lines his nest with snake-skins? or hangs such gruesome things out for latch-strings? He has taken up his residence among us, but he has given us pretty plainly to understand that we need not call, else I mistake the hint in the scaly skin that dangles from his door. The strong personality of the bird is stamped even upon its eggs. Where are any to match them for curious, crazy coloring? The artist had purple inks, shading all the way from the deepest chestnut-purple to the faintest lilac. With a sharp pen he scratched the shell from end to end with all his colors till it was covered, then finished it off with a few wild flourishes and crosswise scrawls.

Like the birds of the orchards and buildings, the field-birds also are yielding to human influences. We can almost say that we have an order of farm-birds, so many species seem to have become entirely dependent upon the pasture and grain-field.

"Where did Bobolink disport himself before there were meadows in the North and rice-

fields in the South? Was he the same lithe, merry-hearted beau then as now?" I do not know. But I do know that, in the thirty and three years since Mr. Burroughs asked the question, Bobolink has lost none of his nimbleness, nor forgotten one bubbling, tinkling note of his song. Yet in his autumn journey South, from the day he reaches the ripe reeds of the Jersey marshes till he is lost in the wide rice-lands of Georgia, his passage is through a ceaseless, pitiless storm of lead. Dare he return to us in spring? and can he ever sing again? He will come if May comes—forgetting and forgiving, dressed in as gay a suit as ever, and just as full of song.

There is no marvel of nature's making equal to the miracle of her temper toward man. How gladly she yields to his masterful dominion! How sufferingly she waits for him to grow out of his spoiled, vicious childhood. The spirit of the bobolink ought to exorcise the savage out of us. It ought, and it does—slowly.

We are trying, for instance, to cow the savage in us by law, to restrain it while the birds are breeding; but we hardly succeed yet. The

mating season is scarcely over, the young not yet grown, when the gunners about me go into the fields with their dogs and locate every covey of quail, even counting the number of birds in

"He will come if May comes."

each. With the dawn of the first day of open season they are out, going from flock to flock, killing, till the last possible bird is in their bloody bags.

One of the most pathetic of all the wordless cries of the out-of-doors is the covey-call of the female quail at night, trying to gather the scattered flock together after the dogs are called off and the hunters have gone home.

It was nearly dark one December afternoon, the snow ankle-deep and falling swiftly, when, crossing a wide field, I heard this call from a piece of sprout-land ahead of me. Kneeling in the snow, I answered the whistle. Instantly came a reply. Back and forth we signaled till there was a whir of wings, and down in the soft snow within a few feet of me dropped the lonely, frightened quail. She was the only one left of a covey that the night before had roosted un-

"Within a few feet of me dropped the lonely frightened quail."

broken, snugly wedged, with their tails together, under a pile of brush.

Sharing the fields with the quails are the meadow-larks. They scale along the grass, rarely rising higher than the cedars, flapping rapidly for a short distance, then sailing a little in a cautious, breath-held manner, as though wings were a new invention and just a trifle dangerous yet. On they go to a fence-stake, and land with many congratulatory flirts of wings and tail. Has anybody observed the feat? They look around. Yes; here I sit,—a man on a fence across the field,—and the lark turns toward me and calls out: "Did you see me?"

He would be the best-bred, most elegant of our birds, were it not for his self-consciousness. He is consumed with it. There is too much gold and jet on his breast. But, in spite of all this, the plain, rich back and wings, the slender legs, the long, delicate beak, the erect carriage, the important air, the sleek, refined appearance, compel us to put him down an aristocrat.

In a closely cropped pasture near the house, in early June, I found the eggs of the night-hawk. There was no nest, of course: the eggs

"On they go to a fence-stake."

lay upon the grass, and, for safety, had been left directly under the fence. The cows might not step on them here, but nothing prevented their crushing the fragile things with their noses.

Lengthwise, upon one of the rails, slept the mother. She zigzagged off at my approach, dazzled and uncertain in the white light of the noon, making no outcry nor stopping an instant to watch the fate of her eggs. She acted like a huge bat, slinking and dodging, out of her element in the light, and anxious to be hid. She did not seem like a creature that had a voice,

and the way she flew would make one think that she did not know the use of her wings. But what a circus flier she is at night! and with what an uncanny noise she haunts the twilight! She has made more hair stand on end, with her earthward plunge and its unearthly boom through the dusk, than all the owls together. It is a ghostly joke. And who would believe in the daylight that this limp, ragged lump, dozing upon the fence or the kitchen roof, could play the spook so cleverly in the dark?

III

On the 25th of April, before the trees were in leaf, I heard the first true wood-note of the spring. It came from the tall oaks beyond the garden. "*Clear, clear, clear up!*" it rang, pure, untamed, and quickening. The solitary vireo! It was his whistle, inimitable, unmistakable; and though I had not seen him since last July, I hurried out to the woods, sure he would greet me.

Solitary is the largest, rarest, tamest, and sweetest-voiced of the vireos. I soon found him high in the tops of the trees; but I wanted him

nearer. He would not descend. So I chased him, stoning and mocking him even, till, at last, he came down to the bushes and showed me his big blue head, white eye-rings, wing-bars, and yellow-washed sides.

He did more than show himself: he sang for me. Within ten feet of me, he began a quiet little warble of a tenderness and contentment I

"It was a love-song."

never heard before. Such variety of notes, such sweetness of melody, such easy, unconscious rendering! It was a love-song, but sung all to himself, for he knew that there was no gentle heart to listen this side of Virginia. He sang to

his own happy heart as pure and sweet a song as the very angels know.

Solitary disappeared from that day. I concluded he had gone to heavier, wilder woods to nest. It was late in June that, passing through this brush-land, I saw hanging from an oak sapling, just above my head, a soft, yellowish basket. It was a vireo's nest; but it was too large, too downy, too yellow for Red-eye. There were no bunches of white spider-webs upon it, such as Red-eye hangs all over his nest. I stepped aside for a better view, and had just caught the glint of a large, white-ringed eye peering over the nest's edge at me, when, off in the woods behind me, the noon hush was startled by Solitary's whistle—a round, pure, pearly note that broke the quiet as pearly teeth break through the smile of a beautiful face. He soon appeared, coming on, a tree at a time, looking and asking, in no hurry and in no alarm. When he reached the pine overhead, his mate left the nest to confer with him. They scolded me mildly while I climbed for a look at the four delicately spotted eggs; but as soon as I lay down upon the ground, the mother, without fuss or fear, slipped into the

nest and cuddled down over the eggs till her head hardly showed above the rim. Had a few bushes been removed I could have seen the nest from my front door.

Why do the wood-birds so persistently build their nests along the paths and roads? I said that even the hermit-thrush prefers a wood with a road through it. If he possibly can he will build along that road. And what one of the birds will not? Is it mere stupidity? Is it curiosity to see what goes on? Is there some safety here from enemies worse than boys and cats and dogs? Or is it that these birds take this chance for human fellowship? If this last is the reason for their rejecting the deep tangles for limbs that overhang roads and tufts of grass in constantly traveled foot-paths, then they can be pardoned; otherwise they are foolish—fatally foolish.

The first black-and-white warbler's nest I ever found was at the base of a clump of bushes in a narrow wood-path not ten feet from a highway. There were acres of bushes beyond, thick and pathless, all theirs to choose from.

In the same piece of scrub-oak the summer after I found another black-and-white warbler's

nest. The loud talk of three of the birds attracted me. Two of them were together, and just mated, evidently; the third was a male, and just as plainly the luckless suitor. He was trying to start a quarrel between the young couple, doing his best to make the new bride break her vows. He flew just ahead of them, darting to the ground, scuttling under the brush, and calling out, "See here! Come here! Don't fool with him any longer! I have the place for a nest!"

But the pair kept on together, chatting brightly as they ran up and down the trees and hunted under the fallen limbs and leaves for a home-site. The male led the way and found the places; the female passed judgment. I followed them.

Every spot the cock peeped into was the finest in the woods; his enthusiasm was constant and unbounded. "Any place is heaven," he kept repeating, "any place, so long as I have you." But she was to do the housekeeping, and the ecstasies of the honeymoon were not to turn her head. She was house-hunting; and, like every woman, at her best. She said "no," and "no,"

and "no." I began to think they never would find the place, when the male darted far ahead and went out of sight beneath some low huckleberry-bushes near a stone wall. This wall ran between the woods and a pasture; and parallel with it, on the woods side, was a foot-path.

Up came the little hen, and together they scratched about under the leaves. Suddenly the cock flew away and fetched a strip of chestnut bark. This he turned over to his wife. Then both birds flew out to the chestnut limbs for bark, and brought their strips back. The home was founded.

It was the merest cavity, pushed into the dead leaves, with three shreds of bark for first timbers. In less than a week the structure was finished and furnished—with a tiny white egg thickly sprinkled with brown. I watched the spot daily, and finally saw the four young warblers safely out into their new woods-world. But from the day the first egg was laid until the nestlings left I constantly expected to find everything crushed under the foot of some passer-by.

When free from household cares the chickadee is the most sociable of the birds of the woods.

"But the pair kept on together, chatting brightly."

But he takes family matters seriously, and withdraws so quietly to the unfrequented parts of the woods during nesting-time as to seem to have migrated. Yet of the four chickadees' nests found about the house, one was in a dead yellow birch in a bit of deep swamp, two others were in yellow birches along wood-roads, and the fourth was in a rotten fence-post by the main road, a long way from any trees.

A workman while mending the fence discovered this last nest. The post crumbled in his hands as he tried to pull it down, revealing the nest of moss and rabbit hair, with its five brown-and-white eggs. He left the old post, propped it up with a sound one, and, mending the broken walls of the cavity the best he could, hurried along with his task, that the birds might return. They came back, found the wreckage of dust and chips covering the eggs, tried the flimsy walls—and went away. It was a desecrated home, neither safe nor beautiful now; so they forsook it.

There is no eagle's nest in this collection of thirty-six. But if Mr. Burroughs is correct, there is the next thing to it—a humming-bird's nest; three of them, indeed, one of which is

within a stone's throw of my door! This one is in the oaks behind my garden, but the other two are even nearer to houses. One of these is upon the limb of a pear-tree. The tip of this limb rubs against a wood-shed connected with a dwelling. The third nest is in a large apple orchard, in the tree nearest the house, and saddled upon that branch of the tree which reaches farthest toward the dwelling. So close is this nest that I can look out of the garret window directly into it.

"In a dead yellow birch."

I believe that Ruby-throat is so far do-

"So close I can look directly into it."

mesticated that he rejoices over every new flower-garden. There was nearly half an acre of gladioli in the neighborhood one summer, where all the humming-birds gathered from far and near. Here, for the only time in my life, I saw a *flock* of humming-birds. I counted eight one day; and the gardener told me that he had often seen a dozen of them among the spikes. They squeaked like bats, and played—about as bullets might play. In fact, I think I dodged when they whizzed past me, as a soldier does the first time he is under fire.

One of my friends had a cellar window abloom

with geraniums. A ruby-throat came often to this window. One day the mistress of the flowers caught the wee chap in her hands. He knew at once that she meant no harm and quietly submitted. A few days later he returned and was captured again. He liked the honey, and evidently the fondling, too, for he came very regularly after that for the nectar and the lady's soft hands.

The nest behind my garden is in the top of a tall, slender maple, with oaks and chestnuts surrounding and overshadowing it. Finding a nest like this is inspiration for the rest of life. The only feat comparable to it is the discovery of a bee-tree. Finding wild bees, I think, would be good training for one intending to hunt humming-birds' nests in the woods. But no one ever had such an intention. No one ever deliberately started into the woods a-saying, "Go to, now; I 'll find a humming-bird's nest in here!"

Humming-birds' nests are the gifts of the gods —rewards for patience and for gratitude because of commoner grants. My nests have invariably come this way, or, if you choose, by accident. The nearest I ever came to earning one was in

the case of this one in the maple. I caught a glimpse of a humming-bird flashing around the high limbs of a chestnut, so far up that she looked no bigger than a hornet. I suspected instantly that she was gathering lichens for a nest, and, as she darted off, I threw my eyes ahead of her across her path. It was just one chance in ten thousand if I even saw her speeding through the limbs and leaves, if I got the line of her flight, to say nothing of a clue to her nesting-place. It was little short of a miracle. I had tried many times before to do it, but this is the only time I ever succeeded: my line of vision fell directly upon the tiny builder as she dropped to her nest in the sapling.

The structure was barely started. I might have stared at it with the strongest glass and never made it out a nest; the sapling, too, was no thicker at the butt than my wrist, and I should not have dreamed of looking into its tall, spindling top for any kind of a nest. Furthermore, as if to rob one of the last possibility of discovering it, a stray bud, two years before, had pushed through the bark of the limb about three inches behind where the nest was to be fixed, and

had grown, till now its leaves hung over the dainty house in an almost perfect canopy and screen.

For three weeks the walls of this house were going up. Is it astonishing that, when finished, they looked like a growth of the limb, like part and parcel of the very tree? I made a daily visit to the sapling until the young birds flew away; then I bent the tree to the ground and brought the nest home. It now hangs above my desk, its thick walls, its downy bed, its leafy canopy telling still of the little mother's unwearied industry, of her infinite love and foresight. So faultlessly formed, so safely saddled to the limb, so exquisitely lichened into harmony with the green around, this tiniest nest speaks for all of the birds. How needless, how sorry, would be the loss of these beautiful neighbors of our copses and fields!

FROM RIVER-OOZE TO TREE-TOP

FROM RIVER-OOZE TO TREE-TOP

THERE are many lovers of the out-of-doors who court her in her robes of roses and in her blithe and happy hours of bird-song only. Now a lover that never sees her barefoot in the meadow, that never hears her commonplace chatter at the frog-pond, that never finds her in her lowly, humdrum life among the toads and snakes, has little genuine love for his mistress.

To know the pixy when one sees it, to call the long Latin name of the ragweed, to exclaim over the bobolink's song, to go into ecstasies at a glorious sunset, is not, necessarily, to love nature at all. One who does all this sincerely, but who stuffs his ears to the din of the spring frogs, is in love with nature's pretty clothes, her dainty airs and fine ways. Her warm, true heart lies deeper down. When one has gone down to that, then a March without peepers will be as lone-

some as a crowd without friends; then an orchard without the weather-wise hyla can never make good his place with mere apples; and the front door without a solemn, philosophic toad beneath its step will lack something quite as needful to its evening peace and homeness as it lacks when the old-fashioned roses and the honeysuckle are gone.

We are not humble nor thoughtful out of doors. There is too much sentiment in our passion for nature. We make colored plates and poems to her. All honor to the poets! especially to those who look carefully and see deeply, like Wordsworth and Emerson and Whitman. But what the common run of us needs, when we go a-wooing nature, is not more poetry, but a scientific course in biology. How a little study in comparative anatomy, for instance, would reveal to us the fearful and wonderful in the make-up of all animal forms! And the fearful and wonderful have a meaning and a beauty which we ought to realize.

We all respond to the flowers and birds, for they demand no mental effort. What about the snakes and frogs? Do we shiver at them? Do

we more than barely endure them? No one can help feeling the comfort and sympathy of the bluebird. The very drifts soften as he appears. He comes some March morning in a flurry of snow, or drops down out of a cheerless, soaking sky, and assures us that he has just left the South and has hurried ahead at considerable hazard to tell us that spring is on the way. Yet, here is another voice, earlier than the bluebird's often, with the bluebird's message, and with even more than the bluebird's authority; but who will listen to a frog? A prophet is not without honor save in his own country. One must needs have wings and come from a foreign land to be received among us as a prophet of the spring. Suppose a little frog noses his way up through the stiff, cold mud, bumps against the ice, and pipes, *Spring! spring! spring!* Has he not as much claim upon our faith as a bird that drops down from no one knows where, with the same message? The bluebird comes because he has seen the spring; Hyla comes because he has the spring in his heart. He that receives Hyla in the name of a prophet shall receive a prophet's reward.

" 'Spring! spring! spring!' "

For me there is no clearer call in all the year than that of the hylas' in the break-up days of March. The sap begins to start in my roots at the first peep. There is something in their brave little summons, as there is in the silvery light on the pussy-willows, that takes hold on my hope and courage, and makes the March mud good to tramp through. And this despite the fact that these early hylas so aggravated my first attack of homesickness that I thought it was to be fatal. The second night I ever spent away from home and my mother was passed with old Mrs. Tribbet, who had a large orchard, behind which was a frog-pond. In vain did she stay me with raisins and comfort me with apples. I was sick for home. And those frogs! When the guineas got quiet, how dreadful they made the long May twilight with their shrieking, strangling, home-sick cries! After all these years I cannot listen to them in the evenings of early spring without catching an echo from the back of that orchard, without just a throb of that pain so near to breaking my heart.

Close by, in a corner lot between the two cross-roads of the village, lies a wretched little

puddle, the home of countless hylas until the June suns dry it up. Among the hundred or more people who live in the vicinity and who pass the pond almost daily, I think that I am the only one who, until recently, was sure he had ever seen a peeper, and knew that they were neither tadpoles, salamanders, nor turtles. As I was standing by the puddle, one May day, a good neighbor came along and stopped with me. The chorus was in full blast—cricket-frogs, Pickering's frogs, spring frogs, and, leading them all, the melancholy quaver of Bufo, the "hop-toad."

"What is it that makes the *dreadful* noise?" my neighbor asked, meaning, I knew, by "dreadful noise," the song of the toad. I handed her my opera-glass, pointed out the minstrel with the doleful bagpipe sprawling at the surface of the water, and, after sixty years of wondering, she saw with immense satisfaction that one part in this familiar spring medley was taken by the common toad.

Sixty springs are a good many springs to be finding out the author of so well-known a sound as this woeful strain of the serenading toad; but more than half a century might be spent in

catching a cricket-frog at his song. I tried to make my neighbor see one that was clinging to a stick in the middle of the puddle ; but her eyes

"A wretched little puddle."

were dim. Deft hands have dressed these peepers. We have heard them by the meadowful every spring of our life, and yet the fingers of one hand number more than the peepers we have seen. One day I bent over three lily-pads till

nearly blind, trying to make out a cricket-frog that was piping all the while somewhere near or upon them. At last, in despair, I made a dash at the pads, only to see the wake as the peeper sank to the bottom an instant before my net struck the surface.

The entire frog family is as protectively colored as this least member, the cricket-frog. They all carry fern-seed in their pockets and go invisible. Notice the wood-frog with his tan suit and black cheeks. He is a mere sound as he hops about over the brown leaves. I have had him jump out of the way of my feet and vanish while I stared hard at him. He lands with legs extended, purposely simulating the shape of the ragged, broken leaves, and offers, as the only clue for one's baffled eyes, the moist glisten as his body dissolves against the dead brown of the leaf-carpet. The tree-toad, *Hyla versicolor*, still more strikingly blends with his surroundings, for, to a certain extent, he can change color to match the bark upon which he sits. More than once, in climbing apple-trees, I have put my hand upon a tree-toad, not distinguishing it from the patches of gray-green lichen upon the limbs. But there

is less of wonder in the tree-toad's ability to change his colors than in the way he has of changing his clothes. He is never troubled with the getting of a new suit; his labor comes in caring for his old ones. It is curious how he disposes of his cast-off clothes.

One day late in autumn I picked up a tree-toad that was stiff and nearly dead with cold. I put him in a wide-mouthed bottle to thaw, and found by evening that he was quite alive, sitting with his toes turned in, looking much surprised at his new quarters. He made himself at home, however, and settled down comfortably, ready for what might happen next.

The following day he climbed up the side of the bottle and slept several hours, his tiny disked toes holding him as easily and restfully as if he were stretched upon a feather-bed. I turned him upside down; but he knew nothing of it until later when he awoke; then he deliberately turned round with his head up and went to sleep again. At night he was wide awake, winking and blinking at the lamp, and watching me through his window of green glass.

A few nights after his rescue Hyla sat upon the

bottom of his bottle in a very queer attitude. His eyes were drawn in, his head was bent down, his feet rolled up—his whole body huddled into a ball less than half its normal size. After a time he began to kick and gasp as if in pain, rolling and unrolling himself desperately. I thought he was dying. He would double up into a bunch, then kick out suddenly and stand up on his hind legs with his mouth wide open as if trying to swallow something. He *was* trying to swallow something, and the thing had stuck on the way. It was a kind of cord, and ran out of each corner of his mouth, passing over his front legs, thinning and disappearing most strangely along his sides.

With the next gulp I saw the cord slip down a little, and, as it did so, the skin along his sides rolled up. It was his old suit! He was taking it off for a new one; and, instead of giving it to the poor, he was trying to economize by eating it. What a meal! What a way to undress! What curious economy!

Long ago the naturalists told us that the toads ate their skins—after shedding them; but it was never made plain to me that they ate them *while*

changing them—indeed, *swallowed* them off! Three great gulps more and the suit—shirt, shoes, stockings, and all—disappeared. Then Hyla winked, drew his clean sleeve across his mouth, and settled back with the very air of one who has magnificently sent away the waiter with the change.

Four days later Hyla ate up this new suit. I saw the entire operation this time. It was almost a case of surgery. He pulled the skin over his head and neck with his fore feet as if it were a shirt, then crammed it into his mouth; kicked it over his back next; worked out his feet and legs; then ate it off as before. The act was accomplished with difficulty, and would have been quite impossible had not Hyla found the most extraordinary of tongues in his head. Next to the ability to speak Russian with the tongue comes the power to skin one's self with it. The tree-toad cannot quite croak Russian, but he can skin himself with his tongue. Unlike ours, his tongue is hung at the front end, with the free end forked and pointing toward his stomach. When my little captive had crammed his mouth full of skin, he stuck this fork of a tongue into it

and forced it down his throat and held it down while he kicked and squirmed out of it.

Though less beautifully clothed than Hyla, our common toad, Bufo, is just as carefully clothed. Where the rain drips from the eaves, clean, narrow lines of pebbles have been washed out of the lawn. On one side of the house the shade lies all day long and the grass is cool and damp. Here, in the shade, a large toad has lived for two summers. I rarely pass that way without seeing him, well hidden in the grass. For several days lately he had been missing, when, searching more closely one morning, I found him sunk to the level of his back in the line of pebbles, his spots and the glands upon his neck so mingling with the varied collection of gravel about him that only a practised eye, and that sharp with expectation, could have made him out.

In a newly plowed field, with some of the fresh soil sticking to him, what thing could look more like a clod than this brown, shapeless lump of a toad? But there is a beauty even in this unlovely form; for here is perfect adaptability.

Our canons of the beautiful are false if they do not in some way include the toad. Shall we

measure all the out-of-doors by the linnet's song, the cardinal-flower's flame, and the hay-field's odor? Deeper, wider, more fundamental and abiding than these standards, lie the intellectual principles of plan and purpose and the intellectual quality of perfect execution. We shall love not alone with all our heart, but with all our mind as well. If we judge the world beautiful by the superficial standard of what happens to please our eye, we shall see no more of the world than we do of the new moon. Whole classes of animals and wide regions of the earth's surface must, by this test, be excluded. The only way the batrachians could possibly come in would be by rolling the frogs in bread-crumbs and frying them. Treated thus, they look good and taste good, but this is all that can be said for the entire family. Studied, however, from the single view-point of protective coloring, or again, as illustrating the ease with which the clumsiest forms can be fitted to the widest variety of conditions, the toads do not suffer by any comparison. In the light of such study, Bufo loses his repulsiveness and comes to have a place quite as unique as the duckbill's, and a personality not

less fascinating than the swallow's or the gray squirrel's.

However, the toad to the most of us is anything but a poem. What, indeed, looks less lovely, less nimble and buoyant, more chained to the earth, than a toad? But stretch the least web between his toes, lengthen his hind legs, and—over he goes, the leopard-frog, champion high diver of the marsh! Or, instead of the web, tip his toes with the tiniest disks, and—there he swings, Pickering's little hyla, clinging as easily to the under surface of that oak-leaf high in the tree as a fly clings to the kitchen ceiling.

When a boy I climbed to the top of the flag-pole on one of the State geological survey stations. The pole rose far above the surrounding pines—the highest point for miles around. As I clinched the top of the staff, gripping my fingers into the socket for the flag-stick, I felt something cold, and drawing myself up, found a tree-toad asleep in the hole. Under him was a second toad, and under the second a third—all dozing up here on the very topmost tip of all the region.

From the river-ooze to the tree-top, nature

carries this toad-form simply by a thin web between the toes, or by tiny disks at their tips. And mixing her greens and browns with just a dash of yellow, she paints them all so skilfully that, upon a lily-pad, beside a lump of clay, or against the lichened limb of an old apple-tree, each sits as securely as Perseus in the charmed helmet that made him invisible.

The frogs have innumerable enemies among the water-birds, the fish, the snakes, and such animals as the fisher, coon, possum, and mink. The toads fortunately are supplied with glands behind their heads whose secretion is hateful to most of their foes, though it seems to be no offense whatever to the snakes. A toad's only chance, when a snake is after him, lies in hiding. I once saw a race between a toad and an adder snake, however, in which the hopper won.

One bright May morning I was listening to the music of the church bells, as it floated out from the city and called softly over the fields, when my reverie was interrupted by a sharp squeak and a thud beside the log on which I sat; something dashed over my foot; and I turned to catch sight of a toad bouncing past the log, mak-

ing hard for the brush along the fence. He scarcely seemed to touch the ground, but skimmed over the grass as if transformed into a midget jack-rabbit. His case was urgent; and little wonder! At the opposite end of the log, raised four or five inches from the grass, her eyes hard glittering, her nose tilted in the air, and astonishment all over her face, swayed the flat, ugly head of a hognose-adder. Evidently she, too, had never seen a toad get away in any such time before; and after staring a moment, she turned under the log and withdrew from the race, beaten.

Hungry snakes and hot, dusty days are death to the toads. Bufo would almost as soon find himself at the bottom of a well as upon a dusty road in blazing sunshine. His day is the night. He is not particular about the moon. All he asks is that the night be warm, that the dew lay the dust and dampen the grass, and that the insects be out in numbers. At night the snakes are asleep, and so are most of those ugly, creaking beasts with rolling iron feet that come crushing along their paths. There is no foe abroad at night, and life, during these dark, quiet hours,

has even for a toad something like a dash of gaiety.

In one of the large pastures not far away stands a pump. It is shaded by an ancient apple-tree, under which, when the days are hottest, the cattle gather to doze and dream. They have worn away the grass about the mossy trough, and the water, slopping over, keeps the spot cool and muddy the summer through. Here the toads congregate from every quarter of the great field. I stretched myself out flat on the grass one night and watched them in the moonlight. There must have been fifty here that night, hopping about over the wet place—as grotesque a band as ever met by woods or waters.

We need no "second sight," no pipe of Pan, no hills of Latmos with a flock to feed, to find ourselves back in that enchanted world of the kelpies and satyrs. All we need to do is to use the eyes and ears we have, and haunt our hills by morning and by moonlight. Here in the moonlight around the old pump I saw goblins, if ever goblins were seen in the light of our moon.

There was not a croak, not a squeak, not the

slightest sound, save the small *pit-pat, pit-pat,* made by their hopping. There may have been some kind of toad talk among them, but listen never so closely, I could not catch a syllable of it.

Where did they all come from? How did they find their way to this wet spot over the hills and across the acres of this wide pasture? You could walk over the field in the daytime and have difficulty in finding a single toad; but here at night, as I lay watching, every few minutes one would hop past me in the grass; or coming down the narrow cow-paths in the faint light I could see a wee black bunch bobbing leisurely along with a hop and a stop, moving slowly toward the pump to join the band of his silent friends under the trough.

Not because there was more food at the pump, nor for the joy of gossip, did the toads meet here. The one thing necessary to their existence is water, and doubtless many of these toads had crossed this pasture of fifteen acres simply to get a drink. I have known a toad to live a year without food, and another to die in three days for lack of water. And yet this thirsty little

beast never knows the pleasure of a real drink, because he does not know how to drink.

I have kept toads confined in cages for weeks at a time, never allowing them water when I could not watch them closely, and I never saw one drink. Instead, they would sprawl out in the saucer on their big, expansive bellies, and *soak* themselves full, as they did here on the damp sand about the pump.

Just after sunset, when the fireflies light up and the crickets and katydids begin to chirp, the toad that sleeps under my front step hops out of bed, kicks the sand off his back, and takes a long look at the weather. He seems to *think* as he sits here on the gravel walk, sober and still, with his face turned skyward. What does he think about? Is he listening to the chorus of the crickets, to the whippoorwills, or is it for supper he is planning? It may be of the vicissitudes of toad life, and of the mutability of all sublunary things, that he meditates. Who knows? Some day perhaps we shall have a batrachian psychology, and I shall understand what it is that my door-step lodger turns over and over in his mind as he watches the coming of the stars. All I can

do now is to minute his cogitations, and I remember one evening when he sat thinking and winking a full hour without making a single hop.

As the darkness comes down he makes off for a night of bug-hunting. At the first peep of dawn, bulging plump at the sides, he turns back for home. Home to a toad usually means any place that offers sleep and safety for the day; but if undisturbed, like the one under the step, he will return to the same spot throughout the summer. This chosen spot may be the door-step, the cracks between the bricks of a well, or the dense leaves of a strawberry-bed.

In the spring of 1899 so very little rain fell between March and June that I had to water my cucumber-hills. There was scarcely a morning during this dry spell that I did not find several toads tucked away for the day in these moist hills. These individuals had no regular home, like the one under the step, but hunted up the coolest, shadiest places in the soft soil and made new beds for themselves every morning.

Their bed-making is very funny, but not likely to meet the approval of the housewife. Wearied with the night's hunting, a toad comes

to the cool cucumber-vines and proceeds at once to kick himself into bed. He backs and kicks and elbows into the loose sand as far as he can, then screws and twists till he is worked out of sight beneath the soil, hind end foremost. Here he lies, with only his big pop-eyes sticking out, half asleep, half awake. If a hungry adder crawls along, he simply pulls in his eyes, the loose sand falls over them, and the snake passes on.

When the nights begin to grow chilly and there are threatenings of frost, the toads hunt up winter quarters, and hide deep down in some warm burrow—till to-morrow if the sun comes out hot, or, it may be, not to wake until next April. Sometimes an unexpected frost catches them, when any shelter must do, when even their snake-fear is put aside or forgotten. "Misery acquaints a man with strange bedfellows," said Trinculo, as he crawled in with Caliban from the storm. So might the toad say in an early frost.

The workmen in a sandstone-quarry near by dug out a bunch of toads one winter, all mixed up with a bunch of adders. They were wriggled and squirmed together in a perfect jumble of

legs, heads, and tails—all in their dead winter sleep. Their common enemy, the frost, had taken them unawares, and driven them like friends into the crevice of the rocks, where they would have slept together until the spring had not the quarrymen unearthed them.

There is much mystery shrouding this humble batrachian. Somewhere in everybody's imagination is a dark cell harboring a toad. Reading down through literature, it is astonishing how often the little monster has hopped into it. There is chance for some one to make a big book of the fable and folk-lore that has been gathering through the ages about the toads. The stories of the jewels in their heads, of their age-long entombments in the rocks, of the warts and spells they induce, of their eating fire and dropping from the clouds, are legion.

And there seems to be some basis of fact for all these tales. No one has yet written for us the life-history of the toad. After having watched the tadpole miracle, one is thoroughly prepared to see toads jump out of the fire, tumble from broken marble mantles, and fall from the clouds. I never caught them in my hat during

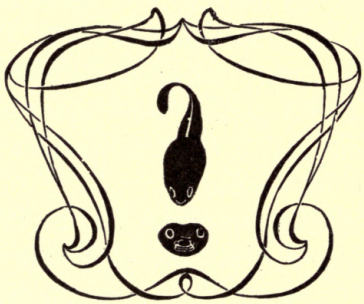
a shower; but I have stood on Mauricetown Bridge, when the big drops came pelting down, and seen those drops apparently turn into tiny toads as they struck the planks, until the bridge was alive with them! Perhaps they had been hiding from the heat between the cracks of the planks—but there are people who believe that they came down from the clouds.

How, again, shall I explain this bit of observation? More than six years I lived near a mud-hole that dried up in July. I passed it almost daily. One spring there was a strange toad-call in the hole, a call that I had never heard anything like before—a deafening, agonizing roar, hoarse and woeful. I found on investigation that the water was moving with spade-foot toads. Two days later the hole was still; every toad was gone. They disappeared; and though I kept that little puddle under watch for several seasons after that, I have not known a spade-foot to appear there since.

The water was almost jellied with their spawn, and a little later was swarming with spade-foot tadpoles. Then it began to dry up, and some of the tadpoles were left stranded in the deep foot-

prints of the cows along the edge of the hole. Just as fast as the water disappeared in these foot-prints, the tails of the tadpoles were absorbed and legs formed, and they hopped away —some of them a week before their brothers, that were hatched at the same time, but who had stayed in the middle of the pond, where the deeper water allowed them a longer babyhood for the use of their tails. So swiftly, under pressure, can nature work with this adaptable body of the toad!

Long before the sun-baked mud began to crack these young ones had gone—where? And whence came their parents, and whither went they? When will they return?



RABBIT ROADS

RABBIT ROADS

IN your woods walks did you ever notice a little furrow or tunnel through the underbrush, a tiny roadway in the briers and huckleberry-bushes? Did you ever try to follow this path to its beginning or end, wondering who traveled it? You have, doubtless. But the woods must be wild and the undergrowth thick and you must be as much at home among the trees as you are in your own dooryard, else this slight mark will make no impression upon you.

But enter any wild tract of wood or high swamp along the creek, and look sharp as you cut across the undergrowth. You will not go far before finding a narrow runway under your feet. It is about five inches wide, leading in no particular direction, and is evidently made by cutting off the small stems of vines and bushes at an inch or more from the ground. The work looks as if it had been laid out by rule and done with a sharp knife, it is so regular and clean.

This is a rabbit road. Follow it a few rods and you will find it crossed by another road, exactly similar. Take this new path now, and soon you are branching off, turning, and joining other roads. You are in rabbit-land, traveling its highways—the most complicated and entangling system of thoroughfares that was ever constructed. The individual roads are straight and plain enough, but at a glance one can see that the plan of the system is intended to bewilder and lead astray all who trespass here. Without a map and directions no one could hope to arrive at any definite point through such a snarl.

There often comes along with the circus a

building called the "Moorish Maze," over whose entrance is this invitation:

COME IN AND GET LOST!

This is what one reads at the cross-roads in rabbit-land. There are finger-boards and milestones along the way; but they point nowhere and mark no distances except to the rabbits.

An animal's strong points usually supplement each other; its well-developed powers are in line with its needs and mode of life. So, by the very demands of his peculiar life, the beaver has become chief among all the animal engineers, his specialty being dams. He can make a good slide for logging, but of the construction of speedways he knows absolutely nothing. The rabbit, on the other hand, is a runner. He can swim if he is obliged to. His interests, however, lie mostly in his heels, and hence in his highways. So Bunny has become an expert road-maker. He cannot build a house, nor dig even a respectable den; he is unable to climb, and his face is too flat for hole-gnawing: but turn him loose in a brambly, briery wilderness, and he will soon thread the trackless waste with a network of

roads, and lay it open to his nimble feet as the sky lies open to the swallow's wings.

But how maddening these roads are to the dogs and foxes! In the first place, they have a peculiar way of beginning nowhere in particular, and of vanishing all at once, in the same blind

"Calamity is hot on his track."

fashion. I am not sure that I ever found a satisfactory end to a rabbit's road—that is, a nest, a playground, or even a feeding-place. Old Calamity, the hound, is always tormented and undone whenever she runs foul of a rabbit road.

She will start Bunny in the open field, and trail away after him in full tongue as fast as her fat

bow-legs will carry her. The rabbit makes for the woods. Calamity is hot on his track, going down toward the creek. Suddenly she finds herself plunging along a rabbit road, breaking her way through by sheer force where the rabbit slipped along with perfect ease. She is following the path now rather than the scent, and, all at once, discovers that she is off the trail. She turns and goes back. Yes, here the rabbit made a sharp break to the right by a side-path; the track is fresh and warm, and the old hound sings in her eager delight. On she goes with more haste, running the path again instead of the trail, and—there is no path! It is gone. This bothers the old dog; but her nose is keen and she has picked up the course again. Here it goes into another road. She gives tongue again, and rushes on, when—*Wow!* she has plunged into a thick and thorny tangle of greenbrier.

That is where the torment comes in. These roads have a habit of taking in the brier-patches. Calamity will go round a patch if she can; she will work her way through if she must—but it is at the cost of bloody ears and a thousand smarting pricks. Bunny, meantime, is watching just

inside the next brier-patch, counting the digs of his clumsy pursuer.

I suppose that this "blind alley" kind of road is due to the fact that the rabbits have no regular homes. They make a nest for the young; but they never have dens, like minks and coons. In New England they often live in holes and among the crannies of the stone walls; and there, as far as I have seen, they rarely or never make roads. Farther south, where the winters are less severe, they dig no holes, for they prefer an open, even an exposed, bed to any sort of shelter.

Shelters are dangerous. Bunny cannot back into a burrow and bare his teeth to his enemy; he is not a fighter. He can run, and he knows it; legs are his salvation, and he must have room to limber them. If he has to fight, then give him the open, not a hole; for it is to be a kangaroo kicking match, and a large ring is needed. He had as well surrender himself at once as to run into a hole that has only one opening.

During the cold, snowy weather the rabbits usually leave the bare fields for the woods, though the older and wiser ones more frequently suffer the storms than risk the greater danger

"Bunny, meantime, is watching just inside the next brier-patch."

of such a move. When pressed by hunger or hounded hard, they often take to a rail-pile, and sometimes they grow so bold as to seek hiding under a barn or house. One young buck lived all winter in the wood-pile of one of my neighbors, becoming so tame that he fed with the chickens.

The nearest approach that a rabbit makes to a house is his "squat," or form. This is simply a sitting-place in the fields or along the woods, that he will change every time he is thoroughly frightened out of it. Undisturbed he will stay in this

squat for months at a time. Occasionally a rabbit will have two or three squats located over his range, each one so placed that a wide view on every side may be had. If it is along the woods, then he sits facing the open fields, with his ears laid back toward the trees. He can hear as far as he can see, and his nose tells him who is coming up the wind sooner than either eyes or ears.

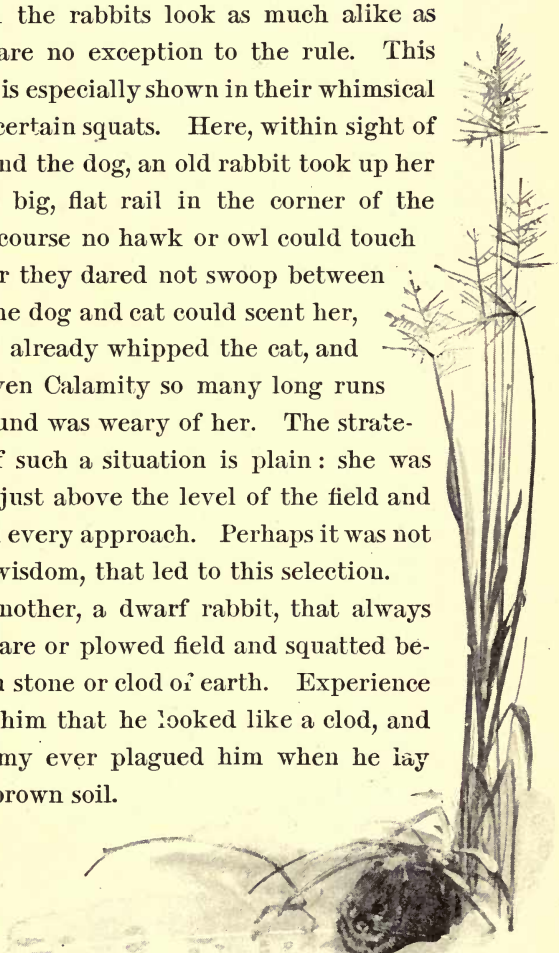
It is cold, lonely living here in the winter. But everybody, except the mice and little birds, are enemies, his only friends being his wits and legs. In the long run, wits and legs are pretty safe insurance. "He who fights and runs away will live to fight another day," is Bunny's precept—and it works well; he still thrives.

The squat is a cold place. The sky is its roof, and its only protection is the tuft of grass, the stone, or the stump beside which it is placed. Bunny may change to the lee or windward side, as suits him, during a storm; but usually he keeps his place and lies close to the ground, no matter how the wind blows, or how fiercely falls the rain and snow. I have frequently started them from their squats in bleak, wind-swept

fields, when the little brown things were completely snowed under.

There is great individuality among all animals, and though the rabbits look as much alike as peas, they are no exception to the rule. This personality is especially shown in their whimsical fancies for certain squats. Here, within sight of the house and the dog, an old rabbit took up her abode on a big, flat rail in the corner of the fence. Of course no hawk or owl could touch her here, for they dared not swoop between the rails; the dog and cat could scent her, but she had already whipped the cat, and she had given Calamity so many long runs that the hound was weary of her. The strategic value of such a situation is plain: she was thus raised just above the level of the field and commanded every approach. Perhaps it was not whim, but wisdom, that led to this selection.

I knew another, a dwarf rabbit, that always got into a bare or plowed field and squatted beside a brown stone or clod of earth. Experience had taught him that he looked like a clod, and that no enemy ever plagued him when he lay low in the brown soil.



"The squat is a cold place."

One summer I stumbled upon a squat close along the public road. Cart-loads of trash had been dumped there, and among the debris was a bottomless coal-scuttle. In the coal-scuttle a rabbit made his squat. Being open at both ends, it sheltered him beautifully from sun and rain. Here he sat, napping through the day, watching the interesting stream of passers-by, himself hidden by the rank weeds and grass. When discovered by a dog or boy, he tripped out of one of his open doors and led the intruder a useless run into the swamp.

At one time my home was separated from the woods by only a clover-field. This clover-field was a favorite feeding-ground for the rabbits of the vicinity. Here, in the early evening, they would gather to feed and frolic; and, not content with clover, they sometimes went into the garden for a dessert of growing corn and young cabbage.

Take a moonlight night in autumn and hide in the edge of these woods. There is to be a rabbit party in the clover-field. The grass has long been cut and the field is clean and shining; but still there is plenty to eat. The rabbits from both sides of the woods are coming. The full

moon rises above the trees, and the cottontails start over. Now, of course, they use the paths which they cut so carefully the longest possible way round. They hop leisurely along, stopping now and then to nibble the sassafras bark or to get a bite of wintergreen, even quitting the path, here and there, for a berry or a bunch of sweet wood-grass.

"Stop a moment; this won't do! Here is a side-path where the briers have grown three inches since they were last cut off. This path must be cleared out at once," and the old buck falls to cutting. By the time he has finished the path a dozen rabbits have assembled in the clover-field. When he appears there is a *thump*, and all look up; some one runs to greet the new-comer; they touch whiskers and smell, then turn to their eating.

The feast is finished, and the games are on. Four or five of the rabbits have come together for a turn at hop-skip-and-jump. And such hop-skip-and-jump! They are professionals at this sport, every one of them. There is not a rabbit in the game that cannot leap five times higher than he can reach on his tiptoes, and hop a clean ten feet.

"The limp, lifeless one hanging over the neck of that fox."

Over and over they go, bounding and bouncing, snapping from their marvelous hind legs as if shot from a spring-trap. It is the greatest jumping exhibition that you will ever see. To have such legs as these is the next best thing to having wings.

Right in the thick of the fun sounds a sharp *thump! thump!* Every rabbit "freezes." It is the stamp of an old buck, the call, *Danger! danger!* He has heard a twig break in the woods, or has seen a soft, shadowy thing cross the moon.

As motionless as stumps squat the rabbits, stiff with the tenseness of every ready muscle. They listen. But it was only a dropping nut or a restless bird; and the play continues.

They are chasing each other over the grass in a game of tag. There go two, round and round, tagging and re-tagging, first one being "it" and then the other. Their circle widens all the time and draws nearer to the woods. This time round they will touch the bush behind which we are watching. Here they come—there they go; they will leap the log yonder. Flash! squeak! scurry! Not a rabbit in the field! Yes; one rabbit—the limp, lifeless one hanging over the

neck of that fox trotting off yonder in the shadows, along the border of the woods!

The picnic is over for this night, and it will be some time before the cottontails so far forget themselves as to play in this place again.

It is small wonder that animals do not laugh. They have so little play. The savage seldom laughs, for he hunts and is hunted like a wild animal, and is allowed so scant opportunity to be off guard that he cannot develop the power to laugh. Much more is this true of the animals. From the day an animal is born, instinct and training are bent toward the circumvention of enemies. There is no time to play, no chance, no cause for laughter.

The little brown rabbit has least reason of all to be glad. He is utterly inoffensive, the enemy of none, but the victim of many. Before he knows his mother he understands the meaning of *Be ready! Watch!* He drinks these words in with his milk. The winds whisper them; the birds call them; every leaf, every twig, every shadow and sound, says: *Be ready! Watch!* Life is but a series of escapes, little else than vigilance and flight. He must sleep with eyes

open, feed with ears up, move with muffled feet, and, at short stages, he must stop, rise on his long hind legs, and listen and look. If he ever forgets, if he pauses one moment for a wordless, noiseless game with his fellows, he dies. For safety's sake he lives alone; but even a rabbit has fits of sociability, and gives way at times to his feelings. The owl and the fox know this, and they watch the open glades and field-edges. They must surprise him.

The barred owl is quick at dodging, but Bunny is quicker. It is the owl's soft, shadow-silent wings that are dreaded. They spirit him through the dusk like a huge moth, wavering and aimless, with dangling dragon-claws. But his drop is swift and certain, and the grip of those loosely hanging legs is the very grip of death. There is no terror like the ghost-terror of the owl.

The fox is feared; but then, he is on legs, not wings, and there are telltale winds that fly before him, far ahead, whispering, *Fox, fox, fox!* The owl, remember, like the wind, has wings—wings that are faster than the wind's, and the latter cannot get ahead to tell of his coming.

Reynard is cunning. Bunny is fore-sighted, wide awake, and fleet of foot. Sometimes he is caught napping—so are we all; but if in wits he is not always Reynard's equal, in speed he holds his own very well with his enemy. Reynard is nimble, but give the little cottontail a few feet handicap in a race for life, and he stands a fair chance of escape, especially in the summer woods.

When the hounds are on his trail the rabbit saves his legs by outwitting his pursuers. He will win a long distance ahead of them, and before they overtake him he will double on his track, approaching as near as he dare to the dogs, then leap far aside upon a log, into a stream, or among the bushes, and strike out in a new direction, gradually making back toward the starting-place. He rises on his haunches to listen, as he goes along, and before the dogs have again picked up the trail, he has perhaps had time to rest and lunch.

If it were a matter of dogs only, life would be just full enough of excitement to be interesting. He can double, balk, and mix trails on them, and enjoy it. They are nothing to fool. But the gun! Ah, that 's a foe which he cannot get up

"His drop is swift and certain."

with. He may double and confuse the dogs; but as he comes back along a side-road, with them yelping far in the rear, he often hops right into a game-bag.

To do justice to the intelligence of the dog, and to be truthful about the rabbit, it must be remembered that, in the chase, Bunny usually has the advantage of knowing the lay of the land. The short cuts, streams, logs, briers, and roads are all in mind before he takes a jump. The dog is often on strange ground. Free the rabbit for the hunt, as you do the fox, on unknown territory, and the dogs will soon take the frightened, bewildered little creature.

There is no braver or more devoted mother in all the wilds than Molly Cottontail. She has a mother's cunning and a mother's resourcefulness, also. But this is to be expected. If number of children count for experience, then, surely, Molly ought to be resourceful. There are seasons when she will raise as many as three families—and old-fashioned families for size, too. It is not uncommon to find ten young rabbits in a nest. Five times twins! And all to be fed, washed, and kept covered up in bed toge-

ther! But animal children, as a rule, behave better than human children, so we may not measure the task of Mother Molly by any standard of our own. It is task enough, however, since you can scarcely count the creatures that eat young rabbits, nor the enemies that unwittingly destroy them. A heavy rain may drown them, cattle may crush them, mowing-machines may cut them to pieces, and boys who are starting menageries may carry them away to starve.

Molly's mother-wit and craft are sufficient for most of these things. She picks out a sunny hillside among high grasses and bushes for the nest, so that the rain will flow off and not flood it, and because that here the cows are not so likely to trample, nor the plow and mowing-machine to come. She must also have ready and hidden access to the nest, which the grass and bushes afford.

She digs a little hollow in the sand about a foot deep and as big around as a duck's nest, lines it first with coarse grasses and leaves, then with a layer of finer grass, and fills the whole with warm, downy fur plucked from her own sides and breast. This nest, not being situated at the

end of an inaccessible burrow, like the tame rabbit's or woodchuck's, requires that all care be taken to conceal every sign of it. The raw sand that is thrown out is artfully covered with leaves and grass to blend with the surrounding ground; and over the nest itself I have seen the old rabbit pull vines and leaves until the inquisitive, nosing skunk would have passed it by.

Molly keeps the young ones in this bed for about two weeks, after which time, if frightened, they will take to their heels. They are exceedingly tender at this age and ought not to be allowed to run out. They do not know what a man is, and hardly understand what their hind legs are. I saw one that was at least a month old jump up before a mowing-machine and bolt across the field. It was his first real scare, and the first time that he had been called upon to test his legs. It was funny. He did n't know how to use them. He made some tremendous leaps, and was so unused to the powerful spring in his hind feet that he turned several complete somersaults in the air.

Molly feeds the family shortly after nightfall, and always tucks them in when leaving, with the

caution to lie quiet and still. She is not often surprised with her young, but lingers near on guard. You can easily tell if you are in the neighborhood of her nest by the way she thumps and watches you, and refuses to be driven off. Here she waits, and if anything smaller than a dog appears she rushes to meet it, stamping the ground in fury. A dog she will intercept by leaving a warm trail across his path, or, in case the brute has no nose for her scent, by throwing herself in front of him and drawing him off on a long chase.

One day, as I was quietly picking wild strawberries on a hill, I heard a curious grunting down the side below me, then the quick *thud ! thud !* of an angry rabbit. Among the bushes I caught a glimpse of rabbit ears. A fight was on.

Crouching beside a bluish spot, which I knew to be a rabbit's nest, was a big yellow cat. He had discovered the young ones, and was making mouths at the thought of how they would taste, when the mother's thump startled him. He squatted flat, with ears back, tail swelled, and hair standing up along his back, as the rabbit leaped over him. It was a glimpse of Molly's

ears, as she made the jump, that I had caught. It was the beginning of the bout—only a feint by the rabbit, just to try the mettle of her antagonist.

The cat was scared, and before he got himself together, Molly, with a mighty bound, was in the air again, and, as she flashed over him, she fetched him a stunning whack on the head that knocked him endwise. He was on his feet in an instant, but just in time to receive a stinging blow on the ear that sent him sprawling several feet down the hill. The rabbit seemed constantly in the air. Back and forth, over and over the cat she flew, and with every bound landed a terrific kick with her powerful hind feet, that was followed by a puff of yellow fur.

The cat could not stand up to this. Every particle of breath and fight was knocked out of him at about the third kick. The green light in his eyes was the light of terror. He got quickly to a bush, and ran away, else I believe that the old rabbit would have beaten him to death.

The seven young ones in the nest were unharmed. Molly grunted and stamped at me for looking at them; but I was too big to kick as she

"Seven young ones in the nest."

had just kicked the cat, and I could not be led away to chase her, as she would have led a dog. The little fellows were nearly ready to leave the nest. A few weeks later, when the wheat was cut in the field above, one of the seven was killed by the long, fearful knife of the reaper.

Perhaps the other six survived until November, the beginning of the gunning season. But when the slaughter was past, if one lived, he remembered more than once the cry of the hounds, the crack of the gun, and the sting of shot. He has won a few months' respite from his human enemies; but this is not peace. There is no peace for him. He may escape a long time yet; but his foes are too many for him. He fights a good fight, but must lose at last.

SECOND CROPS

SECOND CROPS

I

TAKE it the year round, the deadest trees in the woods are the livest and fullest of fruit —for the naturalist. Dr. Holmes had a passion for big trees; the camera-carriers hunt up historic trees; boys with deep pockets take to fruit-trees: but dead trees, since I developed a curiosity for dark holes, have yielded me the most and largest crops.

An ardor for decayed trees is not from any perversity of nature. There is nothing unrea-

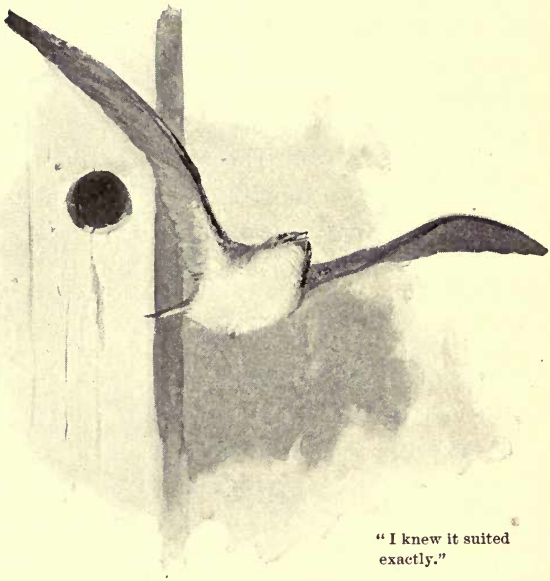
sonable in it, as in—bibliomania, for instance. I discover a gaunt, punky old pine, bored full of holes, and standing among acres of green, characterless companions, with the held breath, the jumping pulse, the bulging eyes of a collector stumbling upon a Caxton in a latest-publication book-store. But my excitement is really with some cause; for—sh! look! In that round hole up there, just under the broken limb, the flame of the red-headed woodpecker—a light in one of the windows of the woods. Peep through it. What rooms! What people! No; I never paid ten cents extra for a volume because it was full of years and mildew and rare errata (I sometimes buy books at a reduction for these accidents); but I have walked miles, and passed forests of green, good-looking trees, to wait in the slim shade of some tottering, limbless old stump.

Within the reach of my landscape four of these ancient derelicts hold their stark arms against the horizon, while every wood-path, pasture-lane, and meadow-road leads past hollow apples, gums, or chestnuts, where there are sure to be happenings as the seasons come and go. Sooner

or later, every dead tree in the neighborhood finds a place in my note-book. They are all named and mentioned, some over and over,—my list of Immortals,—all very dead or very hollow, ranging from a big sweet-gum in the swamp along the creek to an old pump-tree, stuck for a post within fifty feet of my window. The gum is the hollowest, the pump the deadest, tree of the lot.

The nozle-hole of the one-time pump stares hard at my study window like the empty socket of a Cyclops. There is a small bird-house nailed just above the window, which gazes back with its single eye at the staring pump. For some time one April the sputtering sparrows held this box above the window against the attacks of two tree-swallows. The sparrows had been on the ground all winter, and had staked their claim with a nest that had already outgrown the house when the swallows arrived. In love of fair play, and remembering more than one winter day made alive and cheerful by the sparrows, I could not interfere and oust them, though it grieved me to lose the pretty pair of swallows as summer neighbors.

The swallows disappeared. All was quiet for



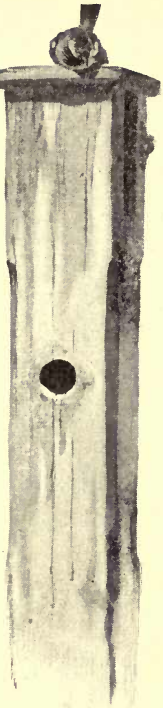
"I knew it suited exactly."

a few days, when, one morning, I saw the flutter of steel-blue wings at the hole in the pump, and there, propped hard with his tail over the hole, hung my tree-swallow. I should have that pair as tenants yet, and in a house where I could see everything they did. He peered quickly around, then peeped cautiously into the opening, and slipped out of sight through the dark, round hole.

I knew it suited exactly by the glad, excited way he came out and darted off. He soon returned with the little shining wife; and through a whole week there was a constant passing of blue backs and white breasts as the joyous pair fitted up the inside of that pump with grass and feathers fit for the cradle of a fairy queen.

By the rarest fortune I was on hand when one of the sparrows discovered what had happened in the pump. There is not a single microbe of Anglophobia in my system. But need one's love for things English include this pestiferous sparrow? Anyhow, I feel just a mite of satisfaction when I recall how that sparrow, with the colonizing instinct of his race, dropping down upon the pump with the notion that he "had a duty to the world," dropped off that pump straightway, concluding that his "duty" did not relate to that particular pump any longer. The sparrows had built everywhere about the place, but that that pump—a post, and a post to a pair of bars at that—was worth settling had not dawned on them. When they saw that the swallows had taken it, one of them lighted there instantly, with tail up, head cocked, very much amazed, and

commenting vociferously. He looked into the hole from every possible point, and was about to enter, when there came a whizz of wings, a flash of blue, and a slap that sent him spinning. When the indignant swallow swooped back, like a boomerang, the sparrow had scuttled off to an apple-tree.



"With tail up, head cocked, very much amazed, and commenting vociferously."

That was a *coup de grâce*. Peace reigned after that; and along in July the five white eggs had found wings and were skimming about the fly-filled air or counting and preening themselves demurely in a solemn row upon the wire fence.

Between two pastures, easily seen from the same study window, stands a wild apple-tree, pathetically dismatic, which, like one of Mr. Burroughs's trees, eased and rheunever bore very good crops of apples, but four seasons a year is marvelously full of

animals. It is chiefly noted for a strange collection I once took out of its maw-like cavity.

It was a keen January morning, and I stopped at the tree, as usual, and thumped. No lodgers there that day, it seemed. I mounted the rail fence and looked in. Darkness. No; there at the bottom was a patch of gray, and—I pulled out a snapping, blinking screech-owl. Down went my hand again, and a second owl came blinking to the light—this one in rich brown plumage. When I turned him up, his clenched claws held fistfuls of possum hair. Once more I pushed my hand down the hole, gingerly, and up to the shoulder. No mistake. Mr. Possum was in there, and after a little manœuvering I seized him by the collar, and out he came grinning, hissing, and winking at the hard, white winter day.

And how exactly like a possum! "There is a time for all things," comes near an incarnation in him. There is a time for eating owls—at night, of course, if owls can then be had. But day is the time to sleep; and if owls want to share his bed and roost upon him, all right. He

will sleep on till nightfall, in spite of owls. And he would sleep on here till dusk, in spite of my rude awakening, if I gave him leave. I dropped him back to the bottom of the hole, then put the two owls back upon him, and went my way, knowing I should find the three still sleeping on my return. And it was so. The owls were just as surprised and just as sleepy when I disturbed them the second time that day. I left them to finish their nap. But the possum was served for dinner the following evening—for this, too, is strictly in accord with his time-for-all-things philosophy.

This pair of owls were most persistent in their attachment to the apple-tree. Several times in the course of the winter I found them sleeping soundly in this same deep cavity, making their winter lodgings in the bent, tumble-down shanty which, standing not far from the woods and between the uplands and meadows, has been home, hotel, post-office, city of refuge, and lookout for many of the wild folk about the fields.

A worn-out, gone-to-holes orchard is a very city of hollows-loving animals. Not far away is one such orchard with a side bordering an

extensive copse. Where the orchard and copse meet is an apple-tree that has been the ancestral

"In a solemn row upon the wire fence."

home of unnumbered generations of flying-squirrels. The cavity was first hollowed out by flickers. The squirrels were interlopers. When

"Young flying-squirrels."

the young come in April the large opening is stuffed with shredded chestnut bark, leaving barely room enough for the parents to squeeze through. The sharpest-eyed hawk awing would never dream of waiting outside that insignificant door for a meal of squirrel.

But such precautions are not always proof against boys. I robbed that home one spring of its entire batch of babies (no one with any love of wild things could resist the temptation to kidnap young flying-squirrels), and tried to bring them up in domestic ways. But somehow I never succeeded with

pets. Something always happened. One of these four squirrels was rocked on, a second was squeezed in a door, a third fell before he could fly, and the fourth I took to college with me. He had perfect liberty, for I had no other room-mate. I set aside one hour a day to putting corks, pens, photographs, and knives back in their places, for him to tuck away the next day in one of my shoes or under my pillow. More than once I have awakened to find him curled up in my neck or up my sleeve, the dearest little bedfellow alive. But it was three stories from my window to the street; and one day he tried his wings. They were not equal to the flight. Since then I have left my wild pets in the woods.

If one wants to know what birds are about, especially the larger, more cautious species, let him get under cover near a tall dead oak or walnut, standing alone in the middle of open fields. Such a tree is the natural rest and look-out for every passer. Here come the hawks to wait and watch; here the sentinel crows are posted while the flock pilfers corn and plugs melons; here the flickers and woodpeckers light

for a quick lunch of grubs, to call for company or telegraph across the fields on one of the resonant limbs; here the flocking blackbirds swoop and settle, making the old tree look as if it had suddenly leaved out in mourning—leaves black and crackling; and here the turkey-buzzards halt heavily in their gruesomely glorious flight.

With good field-glasses there is no other vantage-ground for bird study equal to this. Not in a day's tramp will one see so many birds, and have such chances to observe them, as in a single hour, when the sun is rising or setting, in the neighborhood of some great, gaunt tree that has died of years or lonesomeness, or been smitten by a bolt from the summer clouds.

"The sentinel crows are posted."

II

NATURE'S prodigality and parsimony are extremes farther apart than her east and west. Why should she be so lavish of interstellar space, and crowd a drop of stagnant water so? Why give the wide sea surface to the petrels, and screw the sea-urchins into the rocks on Grand Manan? Why scatter in Delaware Bay a million sturgeon eggs for every one hatched, while each mite of a paramecium is cut in two, and wholes made of the halves? Why leave an entire forest of green, live pines for a lonesome crow hermitage, and convert the rottenest old stump into a submerged-tenth tenement?

Part of the answer, at least, is found in nature's hatred and horror of death. She fiercely refuses to have any dead. An empty heaven, a lifeless sea, an uninhabited rock, a dead drop of water, a dying paramecium, are intolerable and impossible. She hastens always to give them life. The succession of strange dwellers to the decaying trees is an instance of her universal and endless effort at making matter live.

Such vigilance over the ever-dying is very comforting—and marvelous too. Let any indifferent apple-tree begin to have holes, and the tree-toads, the bluebirds, and the red squirrels move in, to fill the empty trunk with new life and the sapless limbs with fresh fruit. Let any tall, stray oak along the river start to die at the top, and straightway a pair of fish-hawks will load new life upon it. And these other, engrafted lives, like the graft of a greening upon wild wood, yield crops more valuable often, and always more interesting, than come from the native stock.

Perhaps there is no more useless fruit or timber grown than that of the swamp-gums (*Nyssa uniflora*) of the Jersey bottoms. But if we value trees according to their capacity for cavities,—the naturalist has a right to such a scale of valuation,—then these gums rank first. The deliberate purpose of a swamp-gum, through its hundred years of life, is to grow as big as possible, that it may hollow out accordingly. They are the natural home-makers of the swamps that border the rivers and creeks in southern New Jersey. What would the coons, the turkey-buzzards, and

the owls do without them? The wild bees believe the gums are especially built for them. No white-painted hive, with its disappearing squares, offers half as much safety to these free-booters of the summer seas as the gums, open-hearted, thick-walled, and impregnable.

When these trees alone make up the swamp, there is a roomy, empty, echo-y effect among the great gray boles, with their high, horizontal limbs spanned like rafters above, produced by no other trees I know. It is worth a trip across the continent to listen, under a clear autumn moon, to the cry of a coon-dog far away in the empty halls of such a swamp. To get the true effect of a barred owl's hooting, one wants to find the home of a pair in an ancient gum-swamp. I know such a home, along Cohansey Creek, where, the neighboring farmer tells me, he has heard the owls hoot in spring and autumn since he remembers hearing anything.

I cannot reach around the butt of the tree that holds the nest. Tapering just a trifle and a little on the lean, it runs up smooth and round for twenty feet, where a big bulge occurs, just above which is the capacious opening to the

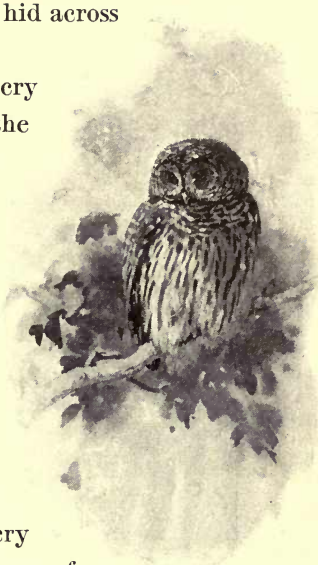
owls' cave. There was design in the bulge, or foresight in the owls' choice; for that excrescence is the hardest thing to get beyond I ever climbed up to. But it must be mounted, or the queerest pair of little dragons ever hatched will go unseen.

The owls themselves first guided me to the spot. I was picking my way through this piece of woods, one April day, when a shadowy something swung from one high limb to another overhead, following me. It was the female owl. Every time she lighted she turned and fixed her big black eyes hard on me, silent, somber, and watchful. As I pushed deeper among the gums, she began to snap her beak and drop closer. Her excitement grew every moment. I looked about for the likely tree. The instant I spied the hole above the bulge, the owl caught the direction of my eyes, and made a swoop at me that I thought meant total blindness.

I began to climb. With this the bird lapsed into the quiet of despair, perched almost in reach of me, and began to hoot mournfully: *Woo-hoo, woo-hoo, woo-hoo, oo-oo-a!* And faint and far away came back a timid *Woo-hoo, woo-a!*

from her mate, safely hid across the creek.

The weird, uncanny cry rolled round under the roof of limbs, and seemed to wake a ghost-owl in every hollow bole, echoing and reëchoing as it called from tree to tree, to die away down the dim, deep vistas of the swamp. The silent wings, the snapping beaks, the eery hoots in the soft gloom of the great trees, needed the help of but little imagination to carry one back to the threshold of an unhacked world, and embolden its nymphs and satyrs, that these centuries of science have hunted into hiding.



"She turned and fixed her big black eyes hard on me."

I wiggled above the bulge at the risk of life, and was greeted at the mouth of the cavern with hisses and beak-snappings from within. It was

a raw spring day; snow still lingered in shady spots. But here, backed against the farther wall of the cavity, were two young owls, scarcely

"Wrapped up like little Eskimos."

a week old, wrapped up like little Eskimos—tiny bundles of down that the whitest-toothed frost could never bite through.

Very green babies of all kinds are queer, un-

certain, indescribable creations—faith generators. But the greenest, homeliest, unlikeliest, babiest babes I ever encountered were these two in the hole. I wish Walt Whitman had seen them. He would have written a poem. They defy my powers of portrayal, for they challenge the whole mob of my normal instincts.

But quite as astonishing as the appearance of the young owls was the presence beneath their feet of the head of a half-grown muskrat, the hind quarters of two frogs, one large meadow-vole, and parts of four mice, with many other pieces too small to identify. These all were fresh—the *crumbs* of one night's dinner, the leavings of *one* night's catch. If these were the fragments only, what would be a conservative estimate of the night's entire catch?

Gilbert White tells of a pair of owls that built under the eaves of Selborne Church, that he "minuted" with his "watch for an hour together," and found that they returned to the nest, the one or the other, "about once in every five minutes" with a mouse or some little beast for the young. Twelve mice an hour! Suppose they hunted only two evening hours a day?

The record at the summer's end is almost beyond belief.

Not counting what the two old owls ate, and leaving out of the count the two frogs, it is within limits to reckon not less than six small animals brought to the hollow gum every night of the three weeks that these young owls were dependent for food—a riddance in this short time of not less than one hundred and twenty-five muskrats, mice, and voles. What four boys in the same time could clear the meadows of half that number? And these animals are all harmful, the muskrats exceedingly so, where the meadows are made by dikes and embankments.

Not a tree in South Jersey that spring bore a more profitable crop. When fruit-growing in Jersey is done for pleasure, the altruistic farmer with a love for natural history will find large reward in his orchards of gums, that now are only swamps.

Just as useful as the crop of owls, and beyond all calculation in its sweetening effects upon our village life, is the annual yield of swallows by the piles in the river. Years ago a high spring tide carried away the south wing of the old

"It is no longer a sorry forest of battered, sunken stumps."

bridge, but left the piles, green and grown over with moss, standing with their heads just above flood-tide mark. In the tops of the piles are holes, bored to pass lines through, or left by rusted bolts, and eaten wide by waves and wind. Besides these there are a few genuine excavations made by erratic woodpeckers. This whole clump of water-logged piles has been colonized

by blue-backed tree-swallows, every crack and cranny wide enough and deep enough to hold a nest being appropriated for domestic uses by a pair of the dainty people. It is no longer a sorry forest of battered, sunken stumps; it is a swallow-Venice. And no gayer gondoliers ever glided over wave-paved streets than these swallows on the river. When the days are longest the village does its whittling on the new bridge in the midst of this twittering bird life, watching the swallows in the sunset skim and flash among the rotting timbers over the golden-flowing tide.

If I turn from the river toward the woods again, I find that the fences all the way are green with vines and a-hum with bumblebees. Even the finger-board at the cross-roads is a living pillar of ivy. All is life. There are no dead, no graveyards anywhere. A nature-made cemetery does not exist in my locality. Yonder, where the forest-fire came down and drank of the river, is a stretch of charred stumps; but every one is alive with some sort of a tenant. Not one of these stumps is a tombstone. We have graves and slabs and names in our burial-

place, and nothing more. But there is not so much as a slab in the fields and woods. When the telegraph-poles and the piles are cut, the stumps are immediately prepared for new life, and soon begin blossoming into successive beds of mosses and mushrooms, while the birds are directed to follow the bare poles and make them live again.

A double line of these pole-specters stretches along the road in front of my door, holding hands around the world. I have grown accustomed to the hum of the wires, and no longer notice the sound. But one May morning recently there was a new note in the pole just outside the yard. I laid my ear to the wood. *Pick—pick—pick;* then all was still. Again, after a moment's pause, I heard *pick—pick—pick* on the inside. At my feet was a scattering of tiny yellow chips. Backing off a little, I discovered the hole, about the size of my fist, away up near the cross-bars. It was not the first time I had found High-hole laying claim to the property of the telegraph companies. I stole back and thumped. Instantly a dangerous bill and a flashing eye appeared, and High-hole, with his miner's lamp burning red

"Even the finger-board is a living pillar of ivy."

in the top of his cap lunged off across the fields in some ill humor, no doubt.

Throughout the summer there was telegraphing with and without wires on that dry, resonant pole. And meantime, if there was anything unintelligible in the ciphers at Glasgow or Washington, it was high-hole talk. For there was reared inside that pole as large, as noisy, and as red-headed a family of flickers as ever hatched. What a brood they were! They must have snarled the wires and Babelized their talk terribly.

While this robust and uncultured family of flickers were growing up, only three doors away (counting by poles) a modest and soft-voiced pair of bluebirds, with a decently numbered family of four, were living in a hole so near the ground that I could look in upon the meek but brave little mother.

There is still another dead-tree crop that the average bird-lover and summer naturalist rarely gathers—I mean the white-footed mice. They are the jolliest little beasts in all the tree hollows. It is when the woods are bare and deep with snow, when the cold, dead winter makes outside living impossible, that one really appreciates the coziness and protection of the life in these deep rooms, sunk like wells into the hearts of the trees. With what unconcern the mice await nightfall and the coming of the storms! They can know nothing of the anxiety and dread of the crows; they can share little of the crows' suffering in the bitter nights of winter. A warm, safe bed is a large item in out-of-doors living when it is cold; and I have seen where these mice tuck themselves away from the dark and storm in beds so snug and warm that I

wished to be an elf myself, with white feet and a long tail, to creep in with them.

I had some wood-choppers near the house on the lookout for mice, but, though they often marked the stumps where they had cut into nests, the winter nearly passed before I secured a single white-foot. Coming up from the pond one day with a clerical friend, after a vain attempt to skate, we lost our way in the knee-deep snow, and while floundering about happened upon a large dead pine that was new to me. It was as stark, as naked, and as dead a tree, apparently, as ever went to dust. The limbs were broken off a foot or more from the trunk, and stuck out like stumps of arms; the top had been drilled through and through by woodpeckers, and now lay several feet away, buried in the snow; and the bole, like the limbs, was without a shred of bark, but covered instead with a thin coating of slime. This slime was marked with fine scratches, as would be made by the nails of very small animals. I almost rudely interrupted my learned friend's discussion of the documentary hypothesis with the irreverent exclamation that there were mice in the old corpse. The

Hebrew scholar stared at the tree. Then he stared at me. Had I gone daft so suddenly? But I was dropping off my overcoat and ordering him away to borrow the ax of a man we heard chopping. He looked utterly undone, but thought it best to humor me, though I know he dreaded putting an ax in my hands just then, and would infinitely rather have substituted his skates. I insisted, however, and he disappeared for the ax.

The snow was deep, the pine was punky and would easily fall; and now was the chance to get my mice. They were in there, I knew, for those fine, fresh scratches told of scramblers gone up to the woodpecker holes since the last storm.

The preacher appeared with the ax. Off came his coat. He was as eager now as though this tottering pine were an altar of Baal. He was anxious, also, to know if I had an extra sense—a kind of X-ray organ that saw mice at the centers of trees. And, priest though he was (shame on the human animal!), he had grown excited at the prospect of the chase of—mice!

I tramped away the snow about the tree. The ax was swinging swiftly through the air; the

preacher was repeating between strokes: "*I'm — truly — sorry — man's — dominion — has—*" when suddenly there was a crunch, a crash, and the axman leaped aside with the yell of a fiend; for, as the tree struck, three tiny, brown-backed, white-footed creatures were dashed into the soft snow. "The prettiest thing I ever saw," he declared enthusiastically, as I put into his hand the only mouse captured.

We traced the chambers up and down the tree as they wound, stairway-like, just inside the hard outer shell. Here and there we came upon garners of acorns and bunches of bird feathers and shredded bark—a complete fortress against the siege of winter.

That pine had not borne a green needle for a decade. It was too long dead and too much decayed to have even a fat knot left. Yet there was not a livelier, more interesting tree in the region that winter, nor one half so full of goings on, as this same old shell of a pine, with scarcely heart enough to stand.

IN THE OCTOBER MOON

IN THE OCTOBER MOON

AN October night, calm, crisp, and moonlit! There is a delicate aroma from the falling leaves in the air, as sweet as the scent of fresh-filled haymows. The woods are silent, shadowy, and sleepful, lighted dimly by the moon, as a vague, happy dream lights the dark valley of our sleep. Dreamful is this night world, but yet not dreaming. When, in the highest noon, did every leaf, every breeze, seem so much a self, so full of ready life? The very twigs that lie brittle and dead beneath our feet seem wakeful now and on the alert. In this silence we feel myriad movings everywhere; and we know that this sleep

is but the sleep of the bivouac fires, that an army is breaking camp to move under cover of the night. Every wild thing that knows the dark will be stirring to-night. And what softest foot can fall without waking the woods?

> Heaped in the hollows of the grove, the autumn leaves lie dead;
> They rustle to the eddying gust, and to the rabbit's tread.

Not a mouse can scurry, not a chestnut drop, not a wind whisper among these new-fallen leaves without discovery; even a weasel cannot dart across the moon-washed path and not leave a streak of brown upon the silver, plain enough to follow.

A morning in May is best of all the year to be afield with the birds; but to watch for the wild four-footed things, a moonlight night in October is the choice of the seasons. May-time is bird-time. That is their spring of mate-winning and nest-building, and it bubbles over with life and song. The birds are ardent lovers; they sometimes fight in their wooing: but fighting or singing, they are frank, happy creatures, and always willing to see you. The mammals are just as

ardent lovers as the birds, and infinitely more serious. But they are not poets; they are not in the show business; and they want no outsider to come and listen to their pretty story of woe. Their spring, their courting-time, is not a time of song and play. The love-affairs of a timid, soulful-eyed rabbit are so charged and intense as not always to be free from tragedy. Don't expect any attention in the spring, even from that bunch of consuming curiosity, the red squirrel; he has something in hand, for once, more to his mind than quizzing you. Life with the animals then, and through the summer, has too much of love and fight and fury, is too terribly earnest, to admit of any frolic.

But autumn brings release from most of these struggles. There is surcease of love; there is abundance of food; and now the only passions of the furry breasts are such gentle desires as abide with the curious and the lovers of peace and plenty. The animals are now engrossed with the task of growing fat and furry. Troubled with no higher ambitions, curiosity, sociability, and a thirst for adventure begin to work within them these long autumn nights,

and not one of them, however wild and fearful, can resist his bent to prowl in the light of the October moon.

To know much of the wild animals at home one must live near their haunts, with eyes and ears open, forever on the watch. For you must wait their pleasure. You cannot entreat them for the sake of science, nor force them in the name of the law. You cannot set up your easel in the meadow, and hire a mink or muskrat to pose for you any time you wish; neither can you call, when you like, at the hollow gum in the swamp and interview a coon. The animals flatly refuse to sit for their pictures, and to see reporters and assessors. But carry your sketch-book and pad with you, and, after a while, in the most unlikely times and places, the wariest will give you sittings for a finished picture, and the most reticent will tell you nearly all that he knows.

At no time of the year are the animals so loquacious, so easy of approach, as along in the October nights. There is little to be seen of them by day. They are cautious folk. By nature most of them are nocturnal; and when this

habit is not inherited, fear has led to its acquisition. But protected by the dark, the shy and suspicious creep out of their hiding-places; they travel along the foot-paths, they play in the wagon-roads, they feed in our gardens, and I have known them to help themselves from our chicken-coops. If one has never haunted the fields and woods at night he little knows their multitude of wild life. Many a hollow stump and uninteresting hole in the ground—tombs by day—give up their dead at night, and something more than ghostly shades come forth.

If one's pulse quickens at the sight and sound of wild things stirring, and he has never seen, in the deepening dusk, a long, sniffling snout poked slowly out of a hollow chestnut, the glint of black, beady eyes, the twitch of papery ears, then a heavy-bodied possum issue from the hole, clasping the edge with its tail, to gaze calmly about before lumbering off among the shadows —then he still has something to go into the woods for.

Our forests by daylight are rapidly being thinned into picnic groves; the bears and panthers have disappeared, and by day there is

nothing to fear, nothing to give our imaginations exercise. But the night remains, and if we hunger for adventure, why, besides the night, here is the skunk; and the two offer a pretty sure chance for excitement. Never to have stood face to face in a narrow path at night with a full-grown, leisurely skunk is to have missed excitement and suspense second only to the staring out of countenance of a green-eyed wildcat. It is surely worth while, in these days of parks and chipmunks, when all stir and adventure has fled the woods, to sally out at night for the mere sake of meeting a skunk, for the shock of standing before a beast that will not give you the path. As you back away from him you feel as if you were really escaping. If there is any genuine adventure left for us in this age of suburbs, we must be helped to it by the dark.

Who ever had a good look at a muskrat in the glare of day? I was drifting noiselessly down the river, recently, when one started to cross just ahead of my boat. He got near midstream, recognized me, and went under like a flash. Even a glimpse like this cannot be had

every summer; but in the autumn nights you cannot hide about their houses and fail to see them. In October they are building their winter lodges, and the clumsiest watcher may spy

"In October they are building their winter lodges."

them glistening in the moonlight as they climb with loads of sedge and mud to the roofs of their sugar-loaf houses. They are readily seen, too, making short excursions into the meadows; and occasionally the desire to rove and see the world will take such hold upon one as to drive him a mile from water, and he will slink along in the shadow of the fences and explore your dooryard

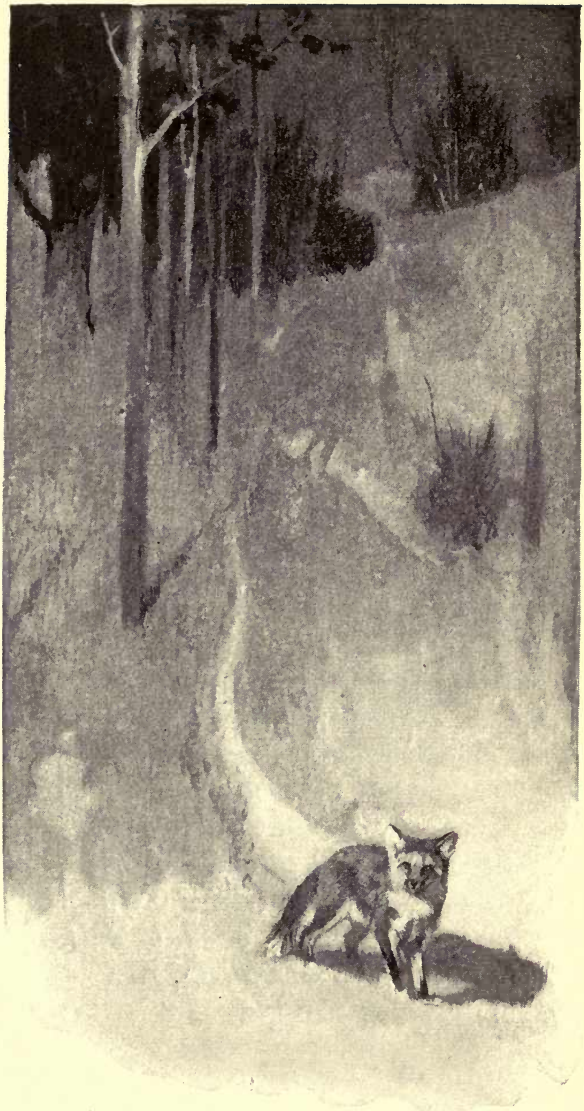
and premises. Frequently, in the late winter, I have followed their tracks on these night journeys through the snow between ponds more than a mile apart.

But there is larger game abroad than musk-rats and possums. These October nights the quail are in covey, the mice are alive in the dry grass, and the foxes are abroad. Lying along the favorite run of Reynard, you *may* see him. There are many sections of the country where the rocks and mountains and wide areas of sterile pine-land still afford the foxes safe homes; but in most localities Reynard is rapidly becoming a name, a creature of fables and folk-lore only. The rare sight of his clean, sharp track in the dust, or in the mud along the margin of the pond, adds flavor to a whole day's tramping; and the glimpse of one in the moonlight, trotting along a cow-path or lying low for Br'er Rabbit, is worth many nights of watching.

I wish the game-laws could be amended to cover every wild animal left to us. In spite of laws they are destined to disappear; but if the fox, weasel, mink, and skunk, the hawks and

owls, were protected as the quail and deer are, they might be preserved a long time to our meadows and woods. How irreparable the loss to our landscape is the extinction of the great golden eagle! How much less of spirit, daring, courage, and life come to us since we no longer mark the majestic creature soaring among the clouds, the monarch of the skies! A dreary world it will be out of doors when we can hear no more the scream of the hawks, can no longer find the tracks of the coon, nor follow a fox to den. We can well afford to part with a turnip, a chicken, and even with a suit of clothes, now and then, for the sake of this wild flavor to our fenced pastures and close-cut meadows.

I ought to have named the crow in the list deserving protection. He steals. So did Falstaff. But I should miss Falstaff had Shakspere left him out; yet no more than I should miss the crow were he driven from the pines. They are both very human. Jim Crow is the humanest bird in feathers. The skunk I did include in the list. It was not by mistake. The skunk has a good and safe side to him, when we know



"The glimpse of Reynard in the moonlight."

how to approach him. The skunk wants a champion. Some one ought to spend an entire October moon with him and give us the better side of his character. If some one would take the trouble to get well acquainted with him at home, it might transpire that we have grievously abused and avoided him.

There is promise of a future for the birds in their friendship for us and in our interest and sentiment for them. Everybody is interested in birds; everybody loves them. There are bird-books and bird-books and bird-books—new volumes in every publisher's spring announcements. Every one with wood ways knows the songs and nests of the more common species. But this is not so with the four-footed animals. They are fewer, shyer, more difficult of study. Only a few of us are enthusiastic enough to back into a hole in a sand-bank and watch all night for the "beasts" with dear old Tam Edwards.

But such nights of watching, when every fallen leaf is a sentinel and every moonbeam a spy, will let us into some secrets about the ponds and fields that the sun, old and all-seeing as he is, will never know. Our eyes were made for daylight;

but I think if the anatomists tried they might find the rudiments of a third, a night eye, behind the other two. From my boyhood I certainly have seen more things at night than the brightest day ever knew of. If our eyes were intended for day use, our other senses seem to work best by night. Do we not take the deepest impressions when the plates of these sharpened senses are exposed in the dark? Even in moonlight our eyes are blundering things; but our hearing, smell, and touch are so quickened by the alertness of night that, with a little training, the imagination quite takes the place of sight—a new sense, swift and vivid, that adds an excitement and freshness to the pleasure of out-of-door study, impossible to get through our two straightforward, honest day eyes.

Albeit, let us stay at home and sleep when there is no moon; and even when she climbs up big and round and bright, there is no surety of a fruitful excursion before the frosts fall. In the summer the animals are worn with home cares and doubly wary for their young; the grass is high, the trees dark, and the yielding green is silent under even so clumsy a crawler as the box-

turtle. But by October the hum of insects is stilled, the meadows are mown, the trees and bushes are getting bare, the moon pours in unhindered, and the crisp leaves crackle and rustle under the softest-padded foot.

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